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# MAXIMISING CONSUMER OUTCOMES FROM RETAIL ELECTRICITY MARKETS

PREPARED FOR THE 2019 ENERGY  
CONSUMERS AUSTRALIA GILL OWEN  
SCHOLARSHIP

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## TABLE OF CONTENT

<b>1. INTRODUCTION</b> .....	<b>4</b>
<b>2. EXECUTIVE SUMMARY</b> .....	<b>5</b>
2.1 What is consumer outcome? .....	5
2.2 Do competitive retail markets ensure positive consumer outcomes? .....	6
2.3 Reconsideration of the NEM’s market structure and institutional arrangements .....	7
2.4 Dealing with vulnerability and hardship .....	8
2.5 Implications for rural and regional communities.....	8
<b>3. METHODOLOGY</b> .....	<b>9</b>
<b>4. DO COMPETITIVE MARKETS MAXIMISE THE VALUE PROVIDED BY ELECTRICITY RETAILERS? .....</b>	<b>10</b>
4.1 What is the value of the retailer? – the free market view.....	11
4.2 Has the promotion of competition increased value for consumers? .....	13
4.3 The countervailing view of retailers - natural oligopolies .....	18
4.4 Maximising value gained from retailers - Implications and recommendations .....	19
<b>5. ROLE OF MARKET STRUCTURE, INSTITUTIONS, &amp; REGULATIONS IN MAXIMISING CONSUMER VALUE .....</b>	<b>22</b>
5.1 Market structure and value .....	22
5.2 Market institutions, regulators, rules and regulations .....	24
5.3 Implications and recommendations .....	29
<b>6. DEALING WITH VULNERABILITY AND HARDSHIP .....</b>	<b>31</b>
6.1 What is hardship or vulnerability? .....	33
6.2 Addressing hardship and vulnerability - Implications and recommendations .....	34
<b>7. SUMMARY OF RECOMMENDATIONS</b> .....	<b>36</b>
<b>REFERENCES</b> .....	<b>38</b>

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## 1. INTRODUCTION

Dr Gill Owen was a tireless advocate for promoting consumer outcomes from energy markets, particularly in addressing energy poverty and, in turn, ensuring social justice. I am particularly impressed on Dr Owen's focus on the impacts of all aspects of energy markets on energy poverty, including the functioning of competitive markets, economic regulations, and balancing sustainability and affordability.

As the 2019 Gill Owen Scholar, I too wanted to make a contribution to promoting better consumer outcomes from electricity markets, particularly for those who live in regional and rural Australia. The Scholarship provided me with the opportunity to interview nearly 40 energy subject matter experts from across Australia, the United Kingdom, and Texas to contribute to the debate around improving consumer outcomes from electricity markets. During these interviews, Dr Owen's reputation and work was continually acknowledged and recognised in Australia and abroad.

The opportunity to interview experts and leaders in person provided insights that could not be obtained through reviews of journal articles. It provided insights into deliberations behind policy decisions, and dispelled myths built up in the literature about competitive energy markets.

Based on feedback from these subject matter experts, the following paper identifies opportunities to improve consumer outcomes from the National Electricity Market (NEM), with a focus on vulnerable consumers and those living in rural and regional areas. The paper contends that the current market structure and design, and institutional arrangements cannot maximise consumer outcome now or into the future. The very assumptions that underpin the vertically separated electricity supply chain no longer apply and require more than incremental market reform to address.

A critical challenge is the lack of a definition for the concept of 'consumer outcome', and metrics to assess the NEM's effectiveness in delivering on outcomes. Without clarity as to this goal, it will be challenging to put in place reforms that maximise an undefined outcome.

This lack of clarity pervades all aspects of consumer outcomes, including addressing the plight of vulnerable consumers and those in hardship. Unlike other jurisdictions, such as the United Kingdom, vulnerability and hardship is not clearly defined, nor are there stated objectives or goals for the myriad of hardship provisions provided by governments and industry players.

This paper provides a definition for consumer outcome, and critiques the electricity market's structure, design, governance and institutional arrangements in achieving this outcome. It questions the ability of deregulated retail markets and a vertically separated supply chain in delivering consumer outcomes, particularly in regional and rural areas, and notes that the institutional arrangements governing the NEM are needlessly complex and dilute accountability.

The paper's recommendations include explicitly defining consumer outcome in the National Energy Objectives; a better understanding of the roles of competition, contestability and deregulation in value creation; reform of institutional arrangements governing markets; separate regulatory arrangements for regional and rural Australia; and the need for a vulnerability strategy in Australia.

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## 2. EXECUTIVE SUMMARY

The establishment of the National Electricity Market (NEM) is predicated on principles of competition, and an extension and continuation of the deregulation agenda that began in the early 1990s through the Hilmer Report (1993). Competitive wholesale markets were developed, network infrastructure owners were separated out from the competitive components of the energy supply chain and regulated as monopolies, and retail electricity markets deregulated.

Deregulation and competition were meant to provide consumers with increased value, however, the prevailing view is that the NEM has fallen short of expectations with respect to consumer outcome. This paper seeks to identify whether the current market structure, institutions and regulatory arrangements can maximise consumer outcome, and provide solutions to address any shortcomings.

### 2.1 What is consumer outcome?

Clarity is required as to what consumer outcomes are in the context of the delivery of electricity services, and metrics need to be agreed upon to gauge the performance of the NEM in delivering on these outcomes. Despite the centrality of the concept, including it being a priority under the National Energy Objectives (NEO), the term is poorly defined in the Australian context.

The United Kingdom by contrast has a working definition of consumer outcome (OFGEM 2019) with reference to lower prices, better reliability and safety, quality of service, and providing for vulnerable consumers.

This paper provides a definition for consumer outcome to help critique current market structures, institutions and regulatory frameworks' ability to achieve these outcomes.

The definition is underpinned by the concept of value:

- Obtaining more (quantity or quality) for the same price.
- Obtaining the same for a lower price.
- Obtaining less for a much lower price.
- Undertaking more social or economic activities per unit of electricity consumed.

**The paper recommends** the NEO provide an explicit definition for consumer outcome, and market institutions and regulators develop metrics to assess the NEM's performance in achieving these outcomes. The paper highlights the Deloitte Access Economics (2019) assessment framework for market outcomes as a good starting point, where a three-pronged approach is used to assess outcomes:

- *Structure* – Metrics on competitiveness including concentration, barriers to entry etc.
- *Conduct* – quality of price and product offerings, consumers' willingness to engage in the market, resourcing of marketing v R&D etc.
- *Performance* – Measures to assess consumer satisfaction and profitability measures for retailers.

## 2.2 Do competitive retail markets ensure positive consumer outcomes?

The paper contends that the conditions that ensure positive consumer outcomes from competitive markets are not present in retail electricity markets. Conditions that promote positive outcomes include:

- readily transparent and comparable prices;
- motivated, informed and engaged buyers and sellers; and
- Price signals changing the behaviour of buyers and sellers.

The complexity and opaqueness of retail electricity markets are too high given the minimal benefits most residential consumers can attain from engaging in the market, with the Victorian Energy Policy Centre (Mountain and Rizio 2019) suggesting that the average savings from switching is \$45 per annum in Victoria. The ineffectiveness of retail markets was more notable in regional and rural communities, where the significant and fixed nature of network costs dulled price signals sent to consumers via retail markets, thus nullifying any behaviour change that may create value.

Interviewees from Texas, the United Kingdom and Australia noted significant benefits of deregulation and competition in wholesale markets, but were less sure of the benefits in retail markets.

*“Every time I have seen a new generator enter the market I have seen immediate benefits for end users. I cannot say the same thing for retailers.” – United Kingdom academic or subject matter expert*

The paper contends that deregulated competitive retail electricity markets have failed to deliver consumer value, particularly through innovation, one of the main justifications for the introduction of the deregulation agenda. The paper seeks further analysis as to the respective roles of deregulation, competition, and contestability in promoting innovation.

More radical critiques suggested that competition in retail markets were having the perverse outcome of destroying value, by increasing marketing and acquisition cost without reducing the underlying cost structure of service provision.

The paper proposes that consideration be given to viewing retail electricity markets as natural oligopolies, noting the significant benefits of owning generation assets, the need for scale in reducing risk and capital costs, and the resultant barriers to entry these factors create. This will have implications on government interventions into retail markets, potentially reducing efforts that aim to simplify market offerings and making prices more transparent, and increasing the focus on more direct interventions, such as price ceilings.

### The paper recommends:

- A more nuanced approach to consumer engagement and switching initiatives, noting that they are not the panacea in delivering consumer outcomes, with the focus of such initiatives on consumers who stand to gain the most from engagement – vulnerable consumers.
- A deep dive into innovation to understand the conditions in which retail markets can deliver on innovation, and in turn, consumer value.
- Prioritisation of initiatives that look to reducing the impact of network costs in regional and rural communities.

## 2.3 Reconsideration of the NEM's market structure and institutional arrangements

Most interviewees suggested that the current vertically separated market structure made it difficult to maximise consumer value due to the significant change in the underlying drivers and assumptions that underpin the current market structure. The inability to optimise outcomes across the electricity supply chain through collaboration and coordination was put forward as the biggest weakness of structural separation.

Structural separation is potentially inhibiting innovations and initiatives that can provide significant value to consumers, including the roll-out of micro-grids, embedded networks, and stand-alone power systems in regional and rural areas. The introduction of these innovations has been delayed due to considerations and deliberations on how to fit these solutions into current market structures and regulatory frameworks.

Market institutions and regulatory arrangements are overly complex and create duplication and a lack of accountability in terms of delivering on consumer outcomes.

*“What is the point of having so many regulators, rule-makers and market institutions to govern such a small number of energy users? It is creating complexity, duplication and a lack of accountability” – current or ex-Australian regulator, rule maker or policymaker*

The sheer number of market institutions and regulators, and the associated consultation and engagement processes, is increasing the administrative costs for industry and consumer groups, which ultimately destroys consumer value. Industry and consumer groups need to engage in more than one consultation process per week to ensure adequate voice in the market design and reform agenda.

Finally, the incremental approach to rule-making within the market cannot handle the seismic changes and challenges facing the NEM, including the decentralisation of generation assets, and changing relationships between generation, transmission/distribution and consumption.

### The paper recommends:

- a review of the current market structure and institutions governing the NEM, as a part of existing review processes, including the Energy Security Board's Post 2025 Market Design for the NEM;
- that consumer representative groups are resourced commensurate to the demands of new market reform and regulatory consultation and engagement processes to ensure that the consumer voice is at the centre of market goals and objectives; and
- an investigation into the merits of separate market arrangements for regional and rural areas, including the potential for vertically integrated electricity systems for these communities.

## 2.4 Dealing with vulnerability and hardship

There is not an holistic view on the challenge of energy vulnerability and hardship. Similarly there is not an overarching view of the efficacy of industry and government initiatives seeking to address this challenge.

**The paper recommends** that a national vulnerability/hardship strategy be developed through an inclusive process involving federal and state governments, industry stakeholders, and consumer advocate groups. Actions include:

- establishment of an annual vulnerability/hardship summit to establish an agreed approach to the challenge amongst impacted stakeholders; and
- the completion of a vulnerability strategy (define vulnerability, review all measures trying to address vulnerability, placing energy vulnerability in the broader context of socio-economic disadvantage, assess efficacy of current initiatives, develop new initiatives etc.).

## 2.5 Implications for rural and regional communities

Regional and rural Australia must determine whether they are best served by a centralised one-size-fits-all approach to market design, as provided by the NEM. The paper suggests that these communities obtain the least benefit from the current market structure, and the regulatory and institutional frameworks that govern the NEM are not primarily focussed on maximising outcomes for these consumers, as evidenced by the lack of focus on network reforms, the cost of which heavily impacts regional and rural users.

Regional and rural communities in Texas are often administered by County Councils or cooperatives, separate from the electricity market administered by the Electricity Reliability Council of Texas (ERCOT) that provide services to most urban areas of Texas. This is in recognition of the different drivers and challenges facing service provision in rural areas as opposed to metropolitan centres.

Regional and rural consumers pay more for electricity than urban consumers, and given the disparity in household income, changes in the price of electricity has a greater negative impact for these users. Regional and rural consumers are also more heavily impacted by a lack of reliability, facing more and longer blackouts and brownouts. Yet there is no concerted effort to mitigate this vulnerability. By contrast, addressing the challenges of rural users is at the heart of the United Kingdom vulnerability strategy (OFGEM 2019).

**The paper recommends:**

- consideration of the costs and benefits of rural communities sitting outside of the NEM, removing the imposition of structural separation and allowing for integrated electricity systems in these regions;
- that any vulnerability/hardship strategy must acknowledge the increased vulnerability of regional and rural communities to changes in the affordability or reliability of electricity, and have specific initiatives to address this vulnerability.



### 3. METHODOLOGY

In preparation for this paper, 37 subject matter experts on local and overseas energy markets were interviewed to gain insights on the opportunities and challenges in obtaining better outcomes for Australian consumers from electricity markets.

The Texan electricity market was chosen as it is often put forward as the most competitive market in the world. The United Kingdom was selected because of its clear stipulation of policy objectives around issues such as climate change and energy vulnerability, and Australia's tendency to replicate policy reforms from this jurisdiction.

The paper does not identify individual interviewees. This allowed interviewees to speak more candidly about opportunities and challenges within the market. Without identifying individual stakeholders, interviewees were selected for their subject matter expertise, including:

- academics and consultants with specialist knowledge of competitive markets and economic regulation design, with specific expertise in wholesale and retail electricity markets;
- CEOs and senior management from electricity generators, retailers, infrastructure owners and industry associations to gain insights into the industry's views of the challenges and opportunities for better outcomes;
- Consumer groups on their views on needed reforms and the process of policy-making; and
- leaders and economists from energy regulators and market institutions (generally ex-staff members) to get an understanding of their reasoning behind regulatory and market-design decisions.

The paper refers and identifies interviewed stakeholders based on their role within energy markets and geographic location. The following tables provides a breakdown of the background and locations of interviewees.

These interviews were semi-structured and focussed on views on the primary role of electricity retailers today and into the future; the capacity of regulatory and institutional frameworks to deliver consumer outcomes noting the fast-changing pace of change with electricity markets, the efficacy of the current market structure in delivering consumer value; dealing with hardship and vulnerability; and implications and impacts of current and future arrangements on regional and rural consumers.

Background or expertise of Interviewees	No. Interviewed
Current or ex-regulator, policy-maker or market institution employee	13
Current or ex-retailer or retail representative group	7
Current or ex-network employee or network representative group	5
Subject matter expert or academic	5
Consumer or end-user advocate	7
<b>Total</b>	<b>37</b>

Market jurisdiction where interviewee operates in	No. Interviewed
Australia	23
United Kingdom	9
Texas	5
<b>Total</b>	<b>37</b>

## 4. DO COMPETITIVE MARKETS MAXIMISE THE VALUE PROVIDED BY ELECTRICITY RETAILERS?

### Key points

- The NEM needs a working definition of ‘consumer outcome’, including metrics that will assist in decision-making when these outcomes are not met.
- Interviewees and consumers have suggested that the current electricity market structure is not delivering the expected consumer outcomes.
- Competition and deregulation is not the panacea in terms of guaranteeing sought outcomes.
- Retail electricity markets may be naturally oligopolistic, suggesting the need for interventions to ensure consumers get their fair share of surplus created within the market.
- The need for further analysis as to the drivers of innovation in retail markets.
- Regional and rural consumers are heavily impacted by network costs, inhibiting any behavioural change from market-driven price signals (i.e. retail markets not effective in creating behavioural change in consumers).

A priority for policymakers, regulators and market institutions is to ensure positive consumer outcomes from electricity markets. The notion of enhancing consumer outcome has been central to any recent review of the NEM, and enshrined in the NEO.

Despite its centrality, the concept of consumer outcome is rarely defined. In its 2018 review of retail electricity markets, and its 2019 inquiry into the NEM, the Australian Competition and Consumer Commission (ACCC) does not define what consumer outcomes are (ACCC 2018, ACCC 2019). Issues around affordability, reliability and transparency are noted as relating to achieving positive consumer outcomes, but this does not constitute a definition.

In contrast, the Office of Gas and Electricity Market (OFGEM 2019), the regulator and policymaker for energy markets in the United Kingdom, defines what positive consumer outcomes are:

- Lower bills than would otherwise have been the case;
- Reduced environmental damage both now and in the future;
- Improved reliability and safety;
- Better quality of service, appropriate for an essential service; and
- Benefits for society as a whole including support for those struggling to pay their bills.

This provides a little more clarity on the concept of consumer outcome, though falling short of an holistic definition of the term.

Energy Consumers Australia (ECA 2018) provides in-depth analysis of the concept of consumer outcome, noting the centrality of efficiency in understanding the concept:

- The provision of electricity efficiently (greatest or given output with least input – productive efficiency);
- That no consumer can be made better off without making someone else worse off, and suppliers are able to make a return (allocative efficiency); and
- Consumers collectively pay no more than they need to for the quality of services they require, now and into the future (dynamic efficiency).

At the heart of the concept of consumer outcome should be the notion of value. Value for a consumer is created when they are getting more (quality or quantity) for the same price, paying less for the same, or paying significantly less for slightly less.

When electricity is viewed as an input into daily and economic life, as opposed to a final good, there is one further way of creating value. Value can be created by enabling more energy intensive economic and social activity using less energy per unit of output. Consumers are not concerned with the unit cost of electricity, they are concerned with the cost of heating, cooling and lighting their homes, and having affordable access to digital entertainment and connectivity.

Viewing electricity as an input breaks the binary relationship between price and value, and often leads into discussions about innovation. This is the one element missing from the ECA concept of consumer outcome, where electricity is seen as a final product.

Value creation for consumers at an aggregate level becomes more complex, where value created for an individual consumer may not improve consumer value overall. There is no positive aggregate outcome when one consumer's value is created through the appropriation of value from another consumer (Bowman & Ambrosini (2010)).

Similarly, value creation at a systems level does not necessarily provide individual or aggregate consumer value. A retailer may create significant value by reducing the cost base of service provision, but if this is not shared with consumers, we have failed to improve overall consumer outcome.

Thus, the role of the market institutions and regulators governing the NEM is to create maximum value from the electricity system in the first instance, ensure that consumers receive their share of this value, and ensure those consumers who are vulnerable or in hardship are equipped to obtain value from a market that often neglects them.

Thus, consumer outcome can be defined as the overall value created for consumers as a whole from electricity markets, noting our definition of value, and ensuring that the most vulnerable consumers are able derive adequate value from this market.

#### **4.1 What is the value of the retailer? – the free market view**

Suppliers within the electricity supply chain must create value. The value of retailers put forward by those who espouse free market principles, including the Australian Energy Market Commission (AEMC 2019), assumes that retailers achieve value for consumer in two ways:

- Competing on product and quality offerings that drive down cost, increase choice and increase the quality of the service provided; and
- Competing on price to ensure that the value they create is shared with consumers.

This conception sees value and value creation as very much a process, a process embedded in competition principles.

Innovation is most often cited as the engine of value creation from this free market approach, particularly with respect to creating new products, improving quality and increasing choice. Proponents of the free market approach assume that reduced regulatory burdens are synonymous with increased innovation.

In its 2019 Retail Energy Market Review, the AEMC noted that interventions in the retail market (such as price caps) will have negative consumer outcomes by stifling innovation. The AEMC goes on to state the need to promote competition and reduce regulatory red-tape to ensure the reduction of barriers to further innovation.

In the absence of empirical evidence, the notion that such regulation stifles innovation is too absolutist. Similarly it is unclear whether innovation will be thwarted by market interventions such as price controls, as many market institutions suggest. More analysis is required to understand the respective roles of contestability and deregulation in advancing innovation in electricity markets. It is not clear why suppliers would not try to gain market share by offering prices below a price cap, and suppliers in the market can still compete on product innovation and service quality to gain market share.

The overwhelming majority of stakeholders interviewed for this research, suggested that the introduction of innovation within retail markets was low, the uptake of innovative products even lower, and generally not targeted at residential consumers. In other words, retail markets have failed to provide meaningful value to most consumers through innovation. It should be noted that nearly all stakeholders interviewed suggested that innovation could transform electricity markets.

*“Bespoke and innovative products have entered into the market, but they tend to focus on a niche segment of the market or business and industrial end-users.” – United Kingdom consumer advocate*

### The innovation illusion

Despite the centrality of innovation in justifying a free market approach, little evidence is provided of innovation within retail electricity markets beyond ‘price and tariff’ innovation. The argument that innovation has yet to materialise due to the infancy of competitive markets rings hollow. Australia has had 15 years of retail contestability, and 10 years of deregulation, in many Australian jurisdictions (AEMC 2019). The fact that new price and tariff options are seen as an innovation does not bode well for the innovativeness of retail electricity markets.

*“We have set the bar low on innovation. I am not dismissing tariff innovation and how it can promote good consumer outcomes, but bundling services or changing the timing of payments shouldn’t be seen as innovation.” Australian consumer advocate*

No evidence is provided that deregulated markets have increased the rate of innovation and its uptake. Undoubtedly there are significant opportunities for innovation within retail markets, including energy as a service, the opportunities associated with providing consumers access to demand response markets, and the role of real-time data in optimising energy use. However, whether Australia’s current approach to competitive markets will provide these benefits is in question.

Not only is the utilisation of innovation extremely low in Australian and global retail markets, the case for innovation and its uptake being reliant on deregulated markets has not been made. Research undertaken by ECA and the Brattle Group (2018) highlights this inertia against the introduction of value-adding innovations, and the need for government intervention to spur the market to adopt these innovations.

Two significant innovations touted in Australia's energy market has been the utilisation of roof-top solar power generation, and the use of smart meters. The uptake of these technologies has had little to do with competitive markets and has been a result of direct government subsidy or roll-out.

Feedback from the majority of stakeholders interviewed suggested hope that innovation would change the retail market, but there was an acknowledgement that there is a lack of uptake of innovative offerings within the market. The majority view was that the future of electricity markets would look very similar to retail markets today.

*“There will always be the need for a mass market retail provider that offers a commodity product at a reasonable price through its economies of scale and the ability to smooth and de-risk volatile wholesale markets for risk averse consumers” – current or ex-Australian regulator, rule maker or policymaker.*

Stakeholders interviewed suggested that innovations and their uptake should be contextualised within the various segments of a retail market, where innovations are most likely to be introduced through business and commercial & industrial markets before ever being utilised in consumer markets.

*“The average residential consumer might provide a retailer between \$50-100 in margin per annum. There really isn't a business case to target bespoke services and innovations to these consumers.” – current or ex-Australian investor or financier*

There is little evidence that the introduction of competition over the past two decades has significantly increased innovation within residential retail markets. Market institutions in Australia tend to dismiss this concern as a function of these retail markets not being fully mature yet, and regulatory red-tape subverting innovation. However, such institutions must also entertain the possibility that the link between deregulated markets and innovation may be overstated with respect to electricity markets.

## 4.2 Has the promotion of competition increased value for consumers?

Innovation is central to the narrative of value creation in deregulated competitive markets. It is suggested that innovation drives down cost structures and provides superior products and services. Without innovation, the main way in which competition provides aggregate consumer outcomes is the appropriation of value or economic surplus from suppliers to consumers, or more perversely, value is appropriated by engaged consumers from the disengaged.

The overwhelming majority of stakeholders felt that competition has not created value, and has simply been a method to distribute existing values between suppliers and consumers, and between various consumer segments.

*“We now have 70 retailers in the market yet prices are not going down. Price signals don't change behaviour as demand is largely inelastic given the essential nature of electricity.” – current or ex-United Kingdom regulator, rule maker or policymaker.*

*“The focus on competitive outcomes simply looks how the cost pie is sliced up between consumers and service providers. It does not look at reducing the underlying cost of providing that service.” – United Kingdom consumer advocate.*

Some, including the Victorian Independent Review Panel on retail energy markets (2017), have suggested that free market principles cannot yield best overall outcomes, given that electricity is an

essential service. It is simply unacceptable that the equilibrium market price would price out any consumer. The review goes further and suggests that in the absence of value creation, the main form of competition is fierce marketing to gain market share. This increases overall cost of service provision, destroying value.

*“It is time to acknowledge the benefits espoused by the introduction of competition and deregulation has largely not materialised in retail energy markets. The main reason for this is that electricity is an essential service and thus consumers do not behave in the way rationalist economic theorist suggest”*  
– **current or ex-Australian regulator, rule maker or policymaker**

Literature on retail energy markets references the Texan market, overseen by the Electricity Reliability Council of Texas (ERCOT), as the example of free competitive markets creating positive consumer outcome. There is significant competition within the Texan market, evidence of innovative products being introduced (Brattle Group 2018), and affordable prices. However, based on my conversations with Texan stakeholders, the story of the Texan market is not so straight forward.

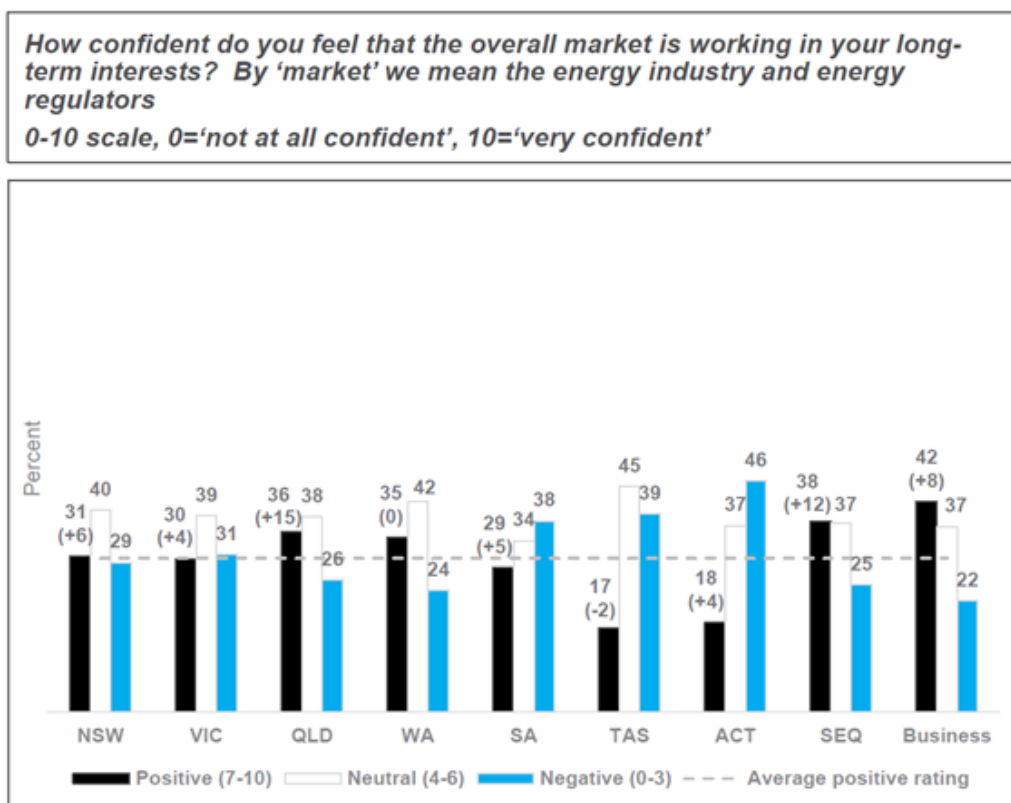
There is a possibility that this success has incorrectly been attributed to retail markets. Proponents of the Texan retail market suggest that these positive outcomes stem from the removal of red tape with respect to obtaining a retail licence, and minimal social or environmental requirements placed on retailers, such as implementing hardship programs. However, it is equally likely that this success stems from a properly functioning wholesale market that benefits from abundant supply.

*“We are a national leader in all forms of energy; we don’t just have oil and gas, we are a leader in renewable energy.”* – **current or ex-Texan regulator, rule maker or policymaker**

The role of free retail markets in creating this consumer outcome is further blurred by the fact that some regulated energy markets within Texas pay less for electricity than those areas governed by competitive markets (Hartley, Medlock III & Jankovska 2017)

While policymakers, regulators and market institutions espouse the benefits of competition, and attribute shortcomings of retail markets to red tape and anti-competitive behaviour, consumers do not hold similar concerns. The June Energy Consumer sentiment Survey (ECA 2019) notes that most consumers are satisfied with the level of competition within the market, except for Tasmania and the ACT, who objectively do lack retail competition within their markets.

The ECA survey noted that consumer confidence in the overall market was low, with less than 40% of consumers in every jurisdiction having positive sentiment towards the market working in their long-term interest.



Source: ECA 2019

This suggests that consumers are not worried about the lack of competition in the market but are worried that the very nature of energy markets will ensure substandard consumer outcomes.

*“In a market like Australia having six retailers who actively compete may be better than having a myriad of smaller retailers.” – current or ex-Australian financier or investor*

Noting recent rhetoric of putting consumers at the centre of energy markets, it is odd that policymakers, regulators and market institutions are so focussed on increasing the quantity of competitors, when consumers seem satisfied with the level of competition in the market.

#### When do free competitive markets work?

Competition and free markets are not inevitable and do not work in all circumstances. The very reason for structural separation of the electricity market, is based on the notion that electricity infrastructure exhibits characteristics of a natural monopoly, where the benefits of economies of scale outweigh the benefits created by unregulated competitive tensions.

*“Free markets work on the notion that price signals will change behaviour within the value chain. This is not the case for electricity. It is very hard to send prices signals up and down the chain from generators, through to transmission and distribution networks, retailers, and finally to the consumer.” – current or ex-Australian network provider*

Interviewees put forward the following requirements for well-functioning free competitive markets:

- readily transparent and comparable prices;
- motivated, informed and engaged buyers and sellers; and
- price signals having the ability to change supply and demand behaviour.

*“Competitive wholesale electricity markets create significant benefit because the conditions are in place to be successful. Prices are transparent, buyers and sellers are informed, motivated and rational. None of these conditions are present in retail markets.” – United Kingdom academic or subject matter expert*

Wholesale electricity markets were put forward as an example where deregulated competitive markets are working.

*“Every time I have seen a new generator enter the market I have seen immediate benefits for end users. I cannot say the same thing for retailers.” – United Kingdom academic or subject matter expert*

Conversely, most interviewees suggested that the conditions were not present to gain optimal benefits from deregulated competitive retail markets.

*“Focusing on retail competition will not get results. Price and quality are not readily transparent. As an example, how do you show and demonstrate the cost and benefits of reliability to the consumer? Even if you could demonstrate this, how is the consumer going to change behaviour based on this information? – current or ex-Australian regulator, rule maker or market institution*

Some interviewees suggested that deregulated retail markets have destroyed value.

*“Competition in retail electricity markets is actually increasing cost. Retailers have been incentivised to focus on attracting new customers through expensive marketing activities without creating any new value. We are destroying value.” – current or ex-Australian regulator, rule maker or policy maker*

The complexity and opaqueness of retail electricity markets are too high given the minimal benefits most residential consumers can attain from engaging in the market. According to a recent study by the Victoria Energy Policy Centre, the average saving obtained by a Victorian consumer from switching has been \$45 per annum, well short of the \$400 savings suggested by many government reviews (Mountain and Rizio 2019).

There is an opportunity cost for consumers investing time in engaging in the market and switching electricity providers. A well-off consumer earning \$150,000 per annum can earn \$80 per hour from work. This consumer will achieve a negative outcome if she spends more than 30 minutes on the switching process (which includes search, selection and implementation of the switch) to obtain the average \$45 saving.

Energy consumers are not faced with the binary choice of creating value through work or engaging in retail electricity markets; there are many activities that can create value for consumers.

Consumers can for example spend time switching to more competitive mortgage products. The average home loan in Australia is approaching \$1 million dollars, and savings of 0.1% on home loan mortgage rates are readily available through switching. This translates into a saving of \$1000 p.a. from switching. The same household can rationally spend over twelve hours on switching their mortgage provider and still create value.



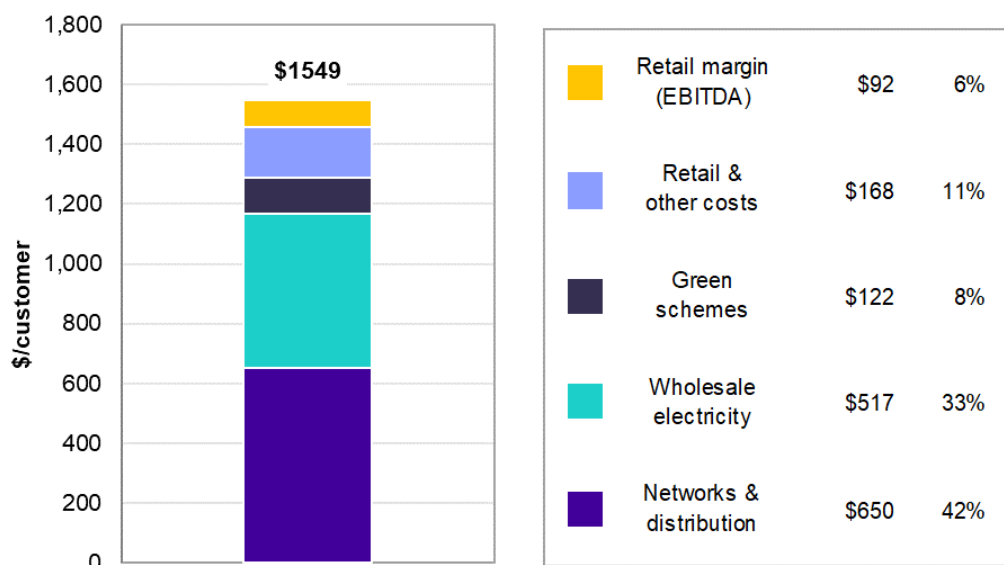
The policy focus on creating transparency in pricing and comparability is admirable, but if savings from switching are to remain meagre, most consumers are rationally better off not engaging in the market.

Consumers who may be financially constrained or in hardship stand to gain most from switching. As an example, a \$45 one-off saving from switching is equivalent to 20% of the weekly income of a consumer on the Newstart allowance. However, these vulnerable consumers often don't have the option to engage in the market (particularly where there are issues with negative credit ratings), despite having the most to gain.

Given these opportunity costs, and the time-limited nature of life, disengagement with the energy market is a completely rational choice for most consumers.

It is questionable whether the level of savings from switching can be sustainably increased for all consumers to a point where consumer engagement becomes a rational choice. Based on the ACCC findings on the cost breakdowns of electricity provision, retail margins contributes a small percentage to the final overall electricity bill, so even a significant appropriation of retail margin would not create significant reductions in the consumer's bills.

Components of a residential customer bill across the NEM 2017-2018 (Source: ACCC 2019)



This goes against the view espoused by various market institutions and energy market participants who suggests that the future will be dominated by digitally engaged consumers.

Given the small cost savings available through tackling retail margins, the fixed nature of network & distribution costs, the most logical way of reducing energy costs is promoting retail products that provide consumers with opportunities to make choices that reduce the costs incurred in wholesale markets.

### 4.3 The countervailing view of retailers - natural oligopolies

The overwhelming majority of stakeholders interviewed for this research, including current and ex-market institution representatives, have a very different view of the value of the retailer:

*“One of the key benefits of retailers is that they de-risk and smooth out energy markets for consumers, and that is largely due to gentailers [integrated electricity generator and retailer]. As far as I am concerned this is the primary benefit.” – Australian academic or subject matter expert*

Many stakeholders noted the natural advantages of the gentailer model in essentially self-insuring against the volatility of wholesale markets and cost-effectively reducing the consumers' exposure to this volatility. If retailers create most value when backed by generation assets, it suggests that retailers must be of a certain size and scale not only to compete, but to create value in the market above and beyond value appropriation and distribution.

*“There are other models, such as retailers backed by PPAs [purchasing power agreements], but the traditional gentailer is here to stay.” – Australian academic or subject matter expert*

Size and scale provides benefits beyond de-risking wholesale markets for consumers: they provide value by reducing the cost of electricity through lower cost of capital.

*“Gentailers have a lower cost of capital because they are asset-backed entities and have lower risk profiles more generally.” - Current or ex-Australian financier or investor*

This view potentially changes the costs and benefits of deregulation and promoting retail competition. Having a myriad of retailers may provide little benefits to the market, as they fail to provide the primary benefit of the retailer.

*“Many new retailers [in the United Kingdom] are unviable in the long-term as they have a higher cost structure than the incumbent retailers. They are a market share play, and once they reach a certain size, they are bought-out by an incumbent.” - Current or ex – United Kingdom retailer or retailer representative*

This suggests that promoting competition is not synonymous with consumer outcome, and that this promotion can sometimes be destructive.

*“Red Energy was pinged by the regulator for rolling-over a customer on a discounted rate that was significantly cheaper than the default offer. The reason given was that such actions inhibit engagement and competition” – Current or ex-Australian retailer or retail representative.*

*“Maybe we need to focus on quality of competition not quantity, maybe Australia can only effectively have six or seven viable retailers. A good example would be New Zealand that seems to have few competitors who compete fiercely.” – Current or ex-Australian financier or investor*

This has implications on how we should regulate and intervene in retail markets. The primary goal of intervention should not be increasing the number of competitors in the market. The focus should be on consumer protection, ensuring that the value created by retail services is shared fairly between suppliers and consumers; and triggers for intervention in the market to address anti-competitive issues or barriers.

This perspective would not view price controls, such as price ceilings, as antithetical to consumer outcomes, it instead ensures that value created in the market is fairly distributed amongst suppliers and the various types of consumers.

## 4.4 Maximising value gained from retailers - Implications and recommendations

### Defining and operationalising the concept of consumer outcome and triggers for intervention

While the overarching goal of the National Energy Objective is to secure long-term consumer outcomes, consumer outcome is poorly defined and notoriously hard to measure, and even harder to determine whether the NEM is delivering on this outcome.

Policymakers tend to suggest that this objective is operationalised in the trilemma: the provision of electricity affordably, reliably, and sustainably. But what do these terms actually mean, and how can we measure whether we have succeeded on delivering on the trilemma?

What do we mean by affordability? Do we focus on overall affordability or focus on different consumer segments? Is it an absolute measure around the cost of electricity as percentage of total income? Do we measure affordability with reference to comparable international jurisdictions, a measure that would be of great interest to business and industrial end-users? Should we focus on retail margin?

Interviewees provided initial thoughts on how we operationalise action on achieving consumer outcomes.

*“We need a three-pronged approach to measuring market outcomes. Are there issues with market structure measures? Are retail margins higher than that expected of a competitive market? Are consumers dissatisfied? If three out of the three conditions exist, we probably need to look at intervention, if two out of three exist we might need a market investigation.” - current or ex-Australian regulator, rule maker or policy maker*

A recent Deloitte Access Economics (2019) paper puts forward a similar three-pronged approach in assessing the electricity market’s ability to deliver consumer outcomes:

- **Structure:** This includes traditional metrics around the competitiveness of the market, such as market concentration, barriers to entry, and level of vertical integration.
- **Conduct:** This thematic potentially looks at the quality of competition including metrics looking at the pricing and product offerings of retailers, investment in research and development, marketing activities, and the consumers’ willingness to engage with the market and adopt new product and services.
- **Performance:** seeks measures on consumer satisfaction, level of complaints and disconnections, and profitability measures for retailers.

The need to gauge performance and have rational and predictable triggers for policy and regulatory intervention becomes of great importance if retail markets are seen as oligopolistic, where the need for regular intervention becomes inevitable as compared to competitive markets.

The 2018 ECA discussion paper, *Operationalising the Long-Term Interests of Consumers*, provides a robust foundation to begin to operationalise the achievement of long-term consumer outcome. It is recommended that further research is undertaken in developing appropriate measures and frameworks for consumer outcomes.

### [A review into the respective contribution of retail deregulation and contestability on consumer outcomes](#)

Further research is required in the Australian market as to whether the consumer outcomes associated with competitive markets stem from deregulation, the introduction of contestability, or a combination thereof.

The findings of this research will have critical implications for policy and regulatory reform. If the retail market is viewed as a natural oligopoly, deregulation would be antithetical in ensuring consumer outcomes, where economic surplus would disproportionately go to oligopoly suppliers due to their market power.

If contestability is found to be the driver of consumer outcome, market interventions, such as price controls, would not materially reduce consumer outcomes and would be seen as a more readily viable intervention.

### [A more nuanced approach to consumer engagement and switching government policies](#)

The time and effort spent by policymakers (and subsequently imposts on retailers) promoting engagement and switching should be reviewed. Increasing consumer engagement and switching is not the panacea to the challenges of providing consumers with value, given the limited contribution of retailers to the overall costs associated with the provision of electricity services, and the modest savings that can be achieved from switching for most consumers.

This is not to say that there is no role for promoting consumer engagement, particularly in ensuring excessive appropriation of economic surplus by suppliers is curtailed. However, the appropriation of excessive surplus can equally be achieved through price regulation and the implementation of strong consumer and competition protections.

Consumer engagement and switching promotion policies should be focussed on consumers that will benefit most from engagement and switching, and these generally tend to be vulnerable consumers and those in hardship. A change in focus may yield a change in proposed solutions. As an example, governments underwriting the creditworthiness of those in hardship may become a viable solution, noting the role of credit in providing access to the market for some vulnerable consumers.

### [A deep dive into innovation](#)

A deep dive is required into the role of innovation in retail electricity markets, and the conditions in which retail markets engender innovation that provide positive consumer outcomes. While there is significant research focus on innovation, there seems to be little in the way of analysis and research of innovation in retail energy markets.

Based on the views put forward by interviewees, the utilisation and uptake of innovation is likely to be led by energy intensive consumers, such as business, commercial and industrial users. As such, regulatory and innovation policy reform efforts should initially be focussed on these markets, given the higher likelihood of success. Successful reforms could then be introduced into the residential consumer markets.

### Implication for regional and rural consumers

The focus on deregulation and competition in retail markets does not address the issues facing regional and rural consumers. These consumers are disproportionately impacted by network costs, and receive the least amount of benefits from deregulated retail markets. According to a NSW Farmers' Association (2017) discussion paper, consumers on regional and rural networks have less retailers to choose from compared to urban networks, and receive less of a discount from default offers by engaging in the market.

Furthermore, rural customers in particular, have greater access to alternatives to grid-supplied electricity, such as solar and diesel generation, so aren't as reliant on retail electricity markets to the same extent as urban consumers.

*“For regional and rural customer an integrated system may provide more benefits for these consumers. I believe Horizon [a fully vertically integrated electricity provider] has done a much better job in servicing regional communities as compared to what regional consumers have received in the National Electricity Market.” – current or ex-Australian network provider*

Regional and rural consumers may be better off with greater price regulation and consumer protection regimes, given the minimal benefits provided by deregulated competitive markets. These consumers would also benefit from a shift in policy focus away from retail markets to one that prioritises reforming the design and regulation of networks.

Some interviewees even suggested that regional communities may be better off sitting outside of the NEM, removing the imposition of structural separation and allowing for integrated systems in regional Australia.

*“Do the benefits of competition justify structural separation of the supply chain and do they outweigh the benefits of integration. It certainly does not work for regional Australia. Given the significant transition towards a decentralised electricity system, the need to coordinate generation, firming capabilities, transmission and distribution networks, the chips are stacked in favour of integration.” -*  
– current or ex-Australian regulator, rule maker or policymaker

## 5. ROLE OF MARKET STRUCTURE, INSTITUTIONS, & REGULATIONS IN MAXIMISING CONSUMER VALUE

### Key points

- The assumptions underpinning the current market structure of vertical separation are changing, requiring a reassessment of market structure.
- The myriad of market institutions and regulators do not optimise consumer outcomes, acts as a barrier to effective consumer and industry engagement, and dilutes responsibility and accountability.
- Consideration needs to be given to a principles and activity-based rule making framework.
- A one-size-fits-all approach to market design no longer works for rural and regional Australia – consideration should be given for separate market arrangements for these communities, including the potential for vertically integrating the electricity supply chain.

### 5.1 Market structure and value

All interviewees accepted that electricity markets could be providing much better value to consumers than they currently provide, however, there were differing views as to whether the current market structure was the cause of this underperformance, and whether reforming and changing this structure would yield benefits.

A majority of interviewees suggested that the structural separation of the electricity system is no longer fit-for-purpose, given the rapid technological change and potential for disruption.

*“Structural separation has created complexity and barriers to realising savings and efficiencies across the different components of the supply chain.” – current or ex-Australian regulator, rule-maker or policy-maker*

Interviewees suggested that innovations and efficiencies were being stymied by this outdated market structure. The introduction of stand-alone power systems (SAPS) were raised most often to highlight this point.

*“There are hundreds, if not thousands, of locations where SAPS can provide electricity more affordably and reliably than the grid, yet there is no movement due to the need to fit the roll-out of SAPs into a regulatory framework and a market structure that makes no sense for them.” – current or ex – Australian network or network representative*

It was further suggested that the distinction between the contestable and non-contestable activities, which informs that current market structure, does not hold anymore. The overarching need for competition can sometimes be achieved synthetically, without the need to have actual competition.

*“Let’s just stop the hand-wringing and get moving on SAPs. Peg it to a retail price index if you have to, there is a real saving to be had and if the consumer offering needs to be de-risked, so be it.” – current or ex-Australian network or network representative*

A minority of interviewees acknowledged challenges with the current market structure, however, suggested that it was how rules and regulations were implemented that was the cause of the inefficiencies. These interviewees suggested that incremental reform would yield best results, with radical reforms further contributing to the sense of uncertainty within the market.

The rules that deem what activities are contestable or non-contestable seems to be blind to outcomes. The example most often cited is the roll-out of smart meters as a contestable service, and making retailers responsible for their roll-out. Interviewees suggested that contestability provided little value in the roll-out of smart meters.

*“Retailers are not equipped to provide smart metering, networks are best placed to do this, they have technicians on the ground to roll them out. For the sake of a principle, we have locked in poor outcomes by forcing retailers to provide the roll-out [smart meters]” – current or ex-United Kingdom network or network representative*

Retailers’ lack of on-the-ground presence was deemed as a fatal factor that is inhibiting the roll-out of smart meters, and this will be a significantly bigger issue in regional and rural areas, where there is even less resources for such a roll-out.

*“I don’t think we really wanted to be responsible for the roll-out of smart meters. We weren’t equipped to provide such a service.” – current or ex-United Kingdom retailer or retailer representative*

Some interviewees suggested that investments in electricity markets do not start from the basis of lowering cost and increasing consumer value, but the ability to fit the investment or activity within the regulatory framework.

*“We have a very negative feedback loop in the electricity market. We regulate based on a market structure and a set of principles that don’t hold anymore. Then we physically organise the electricity system to fit into the regulatory framework, despite it being the least effective way to provide electricity and wonder why we are getting poor outcomes. Distribution and transmission networks are primed to be disrupted, yet the regulation ensures we have an inefficient centralised monopolised system.” – Australian academic or subject matter expert*

The most radical critiques of the current market structure suggest that stakeholders are incentivised to misallocate resources due to conflicts of interest inherent in the system, a system where most stakeholders are incentivised to expand supply.

*“83% of all investment in energy goes to expanding supply, only 17% goes towards energy efficiency [i.e. reduce demand]. Why would a retailer with generation assets want to promote the reduction of demand?” – United Kingdom academic or subject matter expert*

This is supported by International Energy Agency (IEA 2019) data suggesting that 88% of investment is spent on supply, with 12% spent on energy efficiency. It should be noted that the IEA statistics goes beyond electricity and covers all forms of energy investment.

An outcomes and value-based approach to regulatory design may see the market structured much differently.

*“Is it time to revisit market structure? To me it seems like the interdependencies between generation and transmission suggests they should be regulated as one” – Australian consumer advocate*

Indeed market institutions and participants seem to implicitly agree with this sentiment. The AEMC’s Coordination of Generation and Transmission Investment (COGATI) (AEMC 2019) review acknowledges the need to coordinate investment in transmission to match the investments and changes in generation assets. The Energy Security Board (2019) has also suggested rule changes to expedite the implementation of the Integrated Systems Plan for transmission, in light of the significant changing generation environment.

Despite the acknowledgement of significant change in transmission and generation, market institutions have only suggested incremental change to address this. This is in line with interviewees who suggest that electricity markets are not maximising outcomes, but this is less to do with an inappropriate market structure, but poor implementation.

*“Could the supply chain be working better? Yes, but each segment of the supply chain is more or less doing what it needs to do. We do not need radical reform; we need incremental change.” – Australian academic or subject matter expert*

However, the majority of interviewees noted their fear that market rules and regulations will not keep up with the radical changes in the market.

*“The electricity system is being disrupted with distributed energy resources, electric vehicles, and real-time data management. This could be an opportunity to optimise the network and reduce costs significantly. The risk averseness of regulators, and the slow pace of regulatory change will more likely mean this disruption will be seen as a challenge and we will simply throw more money at increasing network infrastructure.” – current or ex-United Kingdom network operator or representative*

## 5.2 Market institutions, regulators, rules and regulations

### Market institutions and regulators

There was absolute consensus amongst interviewees that the sheer number of regulatory and market institutions governing the electricity market was counterproductive.

*“What is the point of having so many regulators, rule-makers and market institutions to govern such a small number of energy users? It is creating complexity, duplication and a lack of accountability.” – current or ex-Australian regulator, rule maker or policymaker*

The majority view was that the institutional arrangements governing the electricity market diluted responsibility and accountability. Given the myriad of state and federal institutions and political offices involved in the NEM, there is no one institution or political office accountable for the failure or success of meeting the NEO.

*“The Energy Security Board (ESB) has some of the most talented people in the industry working for them, but what is the point of the ESB?” – Australian consumer advocate*



Similarly, the scope and remit of the various market institutions and regulators often overlap, and activities are duplicated. This further dilutes responsibility and accountability.

*“Retailers have been let down by regulators and market institutions. Businesses don’t like surprises. Surprises cause risk and cost. AEMC assured retailers and consumers that all was fine in retail markets, then ACCC drops a bomb on retailers [in 2018]. We need more dialogue and more guidance instead of dropping bombs” – current or ex-Australian retailer or retailer representative*

## **MARKET INSTITUTIONS & REGULATORS GOVERNING THE NATIONAL ELECTRICITY MARKET**

Australian Energy Market Commission: The objective of the AEMC’s work is to promote an efficient, reliable and secure energy system which serves the long-term interests of consumers.

The AEMC’s role is to make rules which govern the electricity and natural gas systems and markets, including the retail elements of those markets. AEMC also support the development of the energy systems and markets by providing advice to the COAG Energy Council.

The AEMC undertake market review and provide advice to the COAG Energy Council, including ‘forward looking program of work’ to facilitate structural change within the sector.

Energy Security Board – The ESB provides ‘whole-of-system oversight for energy security and reliability to drive better outcomes for consumers’. Specifically the ESB is responsible for the Retailer Reliability Obligation, Integrated Systems Plan, Post 2020 Market Design reforms and annual monitoring of the performance of the NEM.

Australian Competition and Consumer Commission: Since 2018, the ACCC has been tasked with the monitoring of electricity prices in the NEM, wholesale market prices, profit margins within the industry, contract market liquidity, and analysing the impacts and effects of policy change.

Australian Energy Market Operator: AEMO is responsible for the day-to-day management of wholesale and retail energy market operations Its responsibilities include:

- market operation and administration of the procedures for the energy markets operation of the electricity power system, which is largely integrated with its role as market operator of the NEM.
- coordination of the strategic development of the national electricity grid.
- maintaining and improving power system security
- registering persons as market participants (and providing exemptions)
- providing information to the market through its various electricity reports and the gas bulletin board.

Essential Services Commission (example of state regulator): With respect to electricity, the Essential Services Commission regulates electricity retailers licence requirements, prices and tariffs, and monitors the electricity market for key consumer outcomes.

Australian Energy Regulator (AER): The regulator of the wholesale electricity and gas markets in Australia, and enforces the rules established by the AEMC. The AER also regulates the revenues and prices of natural monopoly businesses (i.e. transmission and networks). The AER is also responsible

for regulation of the retail sale and supply of electricity and gas in those jurisdictions which have adopted the National Energy Retail Law.

Interviewees suggested that the scope and remit of market institutions were poorly conceived, and broadening the scope of the existing market institutions would be a better approach than introducing new institutions.

*“Was it really wise to inject the ACCC as yet another body governing the electricity market? The only advantage of the ACCC is that has investigative powers and can initiate its own work. Why not just give these powers to the AEMC? – current or ex-Australian regulator, rule maker or policymaker*

There are significant administrative costs to the institutional design supporting the NEM. The myriad of prescriptive mandates handed down by the various market institutions and regulators, and the associated engagements and consultations diverts intellectual and management resources of suppliers to administering and managing interaction with current and proposed rules and regulations.

Many interviewees acknowledged the rationale and importance of separating market design and regulation activities from operational activities. Thus, there is a logical need for a stand-alone operator in the form of the Australian Energy Market Operator. However, a significant minority of Australian interviewees did not see the need for the sheer number of institutions and regulators overseeing the electricity market in Australia.

*“There is something attractive about having one entity responsible for the entire system.” – Australian consumer advocate*

Consistent feedback from United Kingdom interviewees suggested that there was a strong vision and strategic direction provided by having one government body overseeing the electricity market (OFGEM). Stakeholders suggested there was clear policy direction on major challenges facing the sector including, dealing with climate change, having a clear strategy on vulnerability and hardship, and providing policy direction on innovation.

While the OFGEM model has contributed to providing a clear strategic direction, some of this direction stems from greater political consensus in the United Kingdom on issues like climate change as compared to Australia.

Despite this strategic direction, the outcomes achieved in the United Kingdom has been compromised by what many United Kingdom interviewees described as poor implementation. This includes mechanisms implemented to meet carbon emissions target and addressing vulnerability.

*“The CfDs [Feed in Tariff Contract for Difference] has baked in high prices for the foreseeable future, and is securing carbon reductions at a significant cost.” – Current or ex-United Kingdom retailer or retail representative*

The CfDs in question provided renewable generation assets with guaranteed returns for between 15-20 years. Interviewees contend that the quantum of these returns and the length of the guarantee has been disproportionate to the need to encourage and promote investment renewable generation.

#### Facilitating or inhibiting meaningful consumer engagement?

The sheer volume of engagement and consultation that these institutions collectively create is counterproductive to effective consumer engagement, overwhelming the resources of consumer

and end-user representative groups, who often have minimal resources to run and manage their members' involvement in energy policy.

In 2018, the various regulators and market institutions likely created 56 consultation processes for suppliers and consumer representatives to engage in, to effectively shape the direction of the electricity market.

The AEMC undertook 14 reviews, and 55 rule changes with respect to the NEM. Even assuming that only 20% of rule change proposals had an impact on any one stakeholder, the AEMC still created 25 consultation processes for industry and consumer representative groups to engage in (AEMC 2019).

The AER undertakes revenue determinations for 21 electricity distribution and transmission networks, which translates into four determinations per year, which necessitates several reviews and stakeholder engagements per determination. Even assuming the need for two engagements per determination, this necessitates eight engagement a year. The networks themselves are required to engage with consumers and the market, creating a further eight engagement points. The AER further engages with the market on more technical aspect of regulation setting, and with respect to its retail market functions. Thus the AER potentially creates up to 20 consultation processes per annum for consumers and suppliers to engage in.

The COAG Energy Council and Energy Security Board has 5-6 open consultations per annum<sup>1</sup>, while state-based regulators, typified by the Essential Services Commission, had 6 consultations that begun or continued into 2018. The increasing incidence of network projects requiring regulatory investment tests, adds another set of consultation processes for consumer groups to engage in.

The rhetoric of putting consumers at the centre of decision-making with respect to the electricity market is undermined by institutional and regulatory arrangements that impose the need to engage in more than one consultation process per week to effectively have the consumer voice heard.

*“The mantra is all about consumers being at the centre of all decisions, yet which program or regulatory process has put consumers at the centre of their decision-making” – current or ex-Australian network provider or network representative*

Some consumer advocates suggest that the current institutional and regulatory regime was made to promote industry interests and ensure effective dialogue with industry not consumers.

*“The regulatory regime is skewed towards industry engagement. AEMC is captured by industry and rule making process geared towards meeting industry objectives.” – Australian consumer advocate*

There is some merit to this claim, leaving aside as to whether this bias towards industry is by design or inadvertent. The sheer volume and complexity of the consultation and engagement process acts as a barrier to an effective consumer voice, with industry stakeholders having the ability to allocate more resources to navigate the process.

The creation of Energy Consumers Australia has provided invaluable resources and expertise to consumer advocates to engage in market consultation processes, however the need to cover the depth and breadth of various government and regulatory reform agendas has diluted this resource.

The introduction of the Energy Charter (see: <https://www.theenergycharter.com.au/>) by industry organisations across the whole of the electricity supply chain could also be a positive way to address

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<sup>1</sup> See Energy Security Board and COAG Energy Council websites:  
<http://www.coagenergycouncil.gov.au/market-bodies/energy-security-board>

the asymmetry of resources and capabilities in dealing with regulatory and policy changes. Under the Charter's principle focusing on the centrality of consumers, the Charter states the need to:

*“demonstrate a culture of innovation and collaboration for positive customer outcomes, including through the sharing of insights with government, research institutions and across the supply chain, as well as joint advocacy on regulatory, policy and operational issues.”*

There will be significant benefit in Charter signatories working with consumer groups and government to formulate an holistic approach to market reform.

### Fit-for-purpose rules and regulations

Many stakeholders challenged the notion that the current rules-driven system of market design was generating value and creating a fit-for-purpose electricity market. This view suggests that a system driven by discrete rules added more burden on retailers, and didn't engender behaviour or culture change amongst suppliers.

*“The regulation of the retail sector is beholden to short-term political cycles, and the more prescriptive the regulation, the more tick the box the industry becomes and the less value focussed.”*

– **current or ex-Australian retailer or retailer representative**

Similarly, interviewees suggested large-scale reforms have been introduced in an ad-hoc manner, and quickly abandoned if they did not yield immediate outcomes. This is most evident in Australia with respect to market reforms relating to dealing with carbon emissions, with several reforms either proposed or introduced into the market, and then abandoned, over the past decade.

*“Interventions are not allowed to take their course, if there is not an immediate outcome another intervention is thrust upon the market”* **current or ex-Australian retailer or retailer representative**

Many of the principles and assumptions underpinning the regulatory framework are changing, and interviewees suggested that incremental change, changing one rule at a time, will not address this challenge.

As an example, the user-pay approach to new transmission network infrastructure, via the regulatory investment tests, were premised on the assumption that new demand created the need for new transmission infrastructure. As the electricity system moves away from centralised generation with long asset lives to one that is very much decentralised, decisions around investment in generation assets are driving the need for new transmission infrastructure. Yet, Australian consumers are still wholly responsible to pay for the cost of these new infrastructure projects.

*“The current RIT-T and RIT-D models basically apportion all the risk of new assets onto consumers, once political decision-makers have deemed the infrastructure project necessary. Consumers are not causing the cost, yet are responsible for the bill in its entirety – Australian consumer advocate*

Similar issues are arising with the increased need for interconnectors between different states in Australia. The proposed interconnectors' main benefit is to provide stability across the entire NEM, yet under current rules, the jurisdiction(s) where the interconnectors will be located will bear the cost of the new infrastructure.

*“I simply cannot see how Tasmanian consumers can pay for the Marinus Link [proposed interconnector between Tasmania and mainland Australia]. If overtime best outcomes cannot fit within these [regulatory and market rule] structures, it suggests that we need reform.” - Australian consumer advocate*

Interviewees suggested that a principles-based approach to rules and regulation replace the current incremental rules-based system. However, there are challenges with the establishment of a principled-based system:

*“A principles-based approach to regulation requires trust in the regulator’s competence and independence in interpreting and enforcing the principles by government, industry and consumers. I don’t think we have this trust yet.” – Current or ex-Australian regulator*

The experience with the introduction principle-based rule-making in the United Kingdom has not as yet created the positive outcomes expected, where principles are not seen as replacing prescriptive rules, but are introduced as yet another prescription to adhere to.

*“I haven’t seen a reduction in prescription, I feel that the principles are another layer on top of existing rules that we need to abide by.” – Current or ex-United Kingdom regulator*

### 5.3 Implications and recommendations

#### Review of current market structure and institutions

Most interviewees have suggested that the current market structure and institutions are acting as a barrier to good outcomes from electricity markets. The Energy Security Board Post 2025 Market Design for the NEM review (COAG 2019) will be vital in addressing the shortcomings of the current system.

The ESB review will need to address a myriad of issues to address wide-spread concern around market structure and design, including:

- the efficacy of the current market structure including the rationale for structural separation;
- the efficacy of a single approach across the NEM, particularly in regional and rural geographies;
- assumptions underlying rules on risk allocation and cost recovery;
- the process in which market rules are introduced; and
- the capabilities of market institutions to ensure positive outcomes in a changing energy landscape.

While the terms of the ESB review is broad, it is unclear whether institutional reform is on the agenda of the ESB. In assessing options for market design, the ESB should consider incremental and radical options for the restructuring of the institutional arrangements of the electricity market. In doing so, the ESB should consider the capabilities required from regulatory and institutional arrangements to meet the future needs of consumers.

#### Resourcing the consumer voice

The need to engage in a new consultation process weekly is unsustainable for energy stakeholders, particularly under-resourced consumer representative groups, acts as a significant barrier for effective engagement and involvement by energy stakeholders and dilutes the voice of the consumer.

Prevention is always preferable to treatment, and the best course of action is to stream-line and coordinate consultation processes initiated by the various regulators and market institutions. In the absence of a reduced consultation workload, governments must ensure funding and resourcing of

consumer groups commensurate to the consultation workload that it creates. At the centre of this resourcing should be funding and equipping Energy Consumers Australia to inform, educate and build the capabilities of consumer groups that rely on the ECA. Resourcing and funding afforded to consumers groups and the ECA should be indexed to the requirements and burdens placed upon them by the myriad of electricity consultation and engagement processes.

The energy industry can play a role in ensuring the centrality of the consumer voice in decisions involving the electricity system via the industry-led Energy Charter. The industry can use the Charter to engage, inform and collaborate with consumers and consumer groups to ensure the centrality of the consumer voice.

### [A bespoke approach to regional and rural Australia](#)

Regional and rural Australia must determine whether they are best served by a centralised one-size-fits-all approach to electricity rules and regulations. The slow pace in establishing microgrids, embedded networks, and stand-alone power systems has not served regional and rural Australia well. The cost of electricity network infrastructure is the overwhelming concern for regional and rural communities, yet very little policy or regulatory reform efforts have focussed on this issue.

Many interviewees point to Horizon Power's success in delivering to rural and regional communities, particularly in delivering on standalone power systems and utilising distributed energy resources. This success has been attributed to the vertically integrated nature of the utility, one that is unencumbered by the prescriptive rules of the NEM.

Similarly, in the Texan electricity market that is often put forward as the model of a free market approach, many rural and remote regions have a non-competitive cooperative vertically integrated approach to electricity. According to Hartley, Medlock III and Jankovska (2019), price incentives and signals from wholesale and retail markets are overwhelmed by higher grid maintenance cost per customer due to low population density. This could in turn negate many of the benefits of competitive markets, making structural separation redundant.

## 6. DEALING WITH VULNERABILITY AND HARDSHIP

### Key points

- Vulnerability and hardship poorly defined, and outcomes sought from initiatives to address hardship unclear.
- Energy vulnerability and hardship a symptom of general social disadvantage and hardship. An holistic approach to hardship and vulnerability is required across all essential services.
- Market driven hardship provisions, such as levies and licence conditions, may have unintended consequences on the operation of the market and in effectively dealing with hardship issues.

A major challenge for policymakers, in Australia and abroad, is aligning the free market principles governing retail electricity markets with the need to ensure access for all consumers, given the essential nature of electricity. The primary question facing policymakers is whether to deal with hardship and vulnerability within the electricity market, via conditions placed upon retail licences, or outside the market through social policies administered by government, or a combination thereof.

This has been a key issue in Australian and the United Kingdom. Both jurisdictions have focussed on a combination of measures within the market, and social policies administered by governments. The Texan market governed by the electricity Reliability Council of Texas (ERCOT) has minimal hardship requirements, and any hardship programs offered generally come from Federal Government, non-government organisations, or by utilities on their own accord. There are benefits and costs associated with all options.

In Australia retailers are obliged to provide hardship measures to consumers under the National Energy Retail Law. These obligations include processes to identify customers experiencing payment difficulties due to hardship, early response by the retailer to customers in hardship, flexible payment options for the payment of energy bills, the promotion of appropriate government concession programs and appropriate financial counselling services to hardship customers, and an outline of programs that the retailer may use to assist these customers.

Some consumer advocates were critical of this approach, where hardship provisions did not work towards any clear consumer outcome.

*“Hardship provisions are process driven, they don’t purport to provide any tangible outcome in reducing hardship and its impact.” – Australian consumer advocate*

This is supported by analysis undertaken by the AER (2017) that highlighted that the majority of consumers seeking access to hardship provisions being excluded from assistance, and of those provided assistance, three quarters did not have their debt issue resolved. The AEMC (2018) rule

change to strengthen hardship provisions merely provide greater prescription as to what a retailer hardship program should provide, as opposed to directly addressing the issue of outcomes.

The lack of outcomes is not necessarily the result of retailers' shirking their obligations. The market structure and prescriptive rules and regulations act as barriers to effective hardship assistance.

*"We were considering providing farmers affected by drought with payment moratoriums. However, we still need to pay all the network charges on time. This significantly increases the cost of addressing hardship. If all parties came to the table, we could do a lot more."* - **Current or ex-Australian retailer or retail representative**

Australian Governments provide various concessional payments and rebates to vulnerable consumers or those in hardship. These payments are generally linked to existing government benefits, such as having a concession or pension card, and not based on a specific assessment of hardship or vulnerability.

Critics of this approach suggest that these payments are not sufficiently targeted and that it is a reactive approach to vulnerability and hardship. They do not address the underlying problems such as lack of access to credit or a poor credit rating, inability to access energy efficient appliances, and energy inefficient housing stock.

The United Kingdom has taken a more holistic approach to hardship and vulnerability with a comprehensive approach through the *Consumer Vulnerability Strategy 2025* (OFGEM 2019). The Strategy:

- provides a dynamic definition of energy vulnerability to effectively target at risk consumers;
- defines outcomes sought in addressing vulnerability;
- applies various vulnerability and hardship requirements on retailers;
- collects levies, such as the Warm Home Discount, to provide for payments to vulnerable customers;
- includes energy efficiency programs focussed on improving heating systems;
- annual forums bringing together industry, government, consumer groups and social service providers;
- introduced price protection of consumers on default tariffs;
- provides regulatory incentives to encourage greater network engagement in identifying and addressing vulnerability; and
- requires annual review and reporting on the vulnerable consumers.

Interviewees suggested that the holistic approach by OFGEM to vulnerability has garnered better outcomes for vulnerable customers. However, some specific methods in implementing the strategy have led to suboptimal outcomes.

As an example, small retailers are exempt from many of the hardship obligations placed on retailers more generally. The underlying principle behind this was to avoid placing undue imposts on small retailers entering the market and ensuring continued competition. However, this has had perverse impacts on the retail market, including vulnerable customers serviced by small retailers receiving no hardship support. It has also had an impact on competition in the market.

*"New entrants are incentivised to avoid consumer markets by providing business only tariffs or capping its consumer base to 100,000 and then sell the business to one of the big six."* – **UK consumer advocate**



The above example seems to suggest that the balancing act of addressing vulnerability using market solutions is a difficult balancing – one that the United Kingdom has not mastered as yet.

The UK approach of imposing hardship levies on retailers has distorted the retail market, and this is one of the main downsides of in market approaches. Beyond the unpalatability of new taxes, it is hard to understand why hardship and vulnerability programs cannot be funded through the government's consolidated revenues, outside of the electricity markets.

### 6.1 What is hardship or vulnerability?

In Australia the regulatory focus is on hardship, which is defined under the National Energy Retail Laws as “residential consumers experiencing financial payment difficulties due to hardship in accordance with the retailer’s customer hardship policy.” As such, it is up to individual retailers to define hardship, with the approval of the AER.

Despite calls by consumer groups for an inclusive definition of hardship, and AER analysis demonstrating the vast number of consumers excluded from hardship programs (AER 2017), the AEMC (2018) did not support the inclusion of a definition in a recent rule change determination on hardship.

This is in stark contrast to the approach taken in the United Kingdom, where a broad definition of vulnerability has been established. OFGEM (2019) provides a dynamic definition of vulnerability. The definition provides that a vulnerable consumer is one where circumstances combine with the following characteristics:

- significantly less ability than a typical consumer to protect or represent his or her interests in the energy market; and/or
- significantly more likely than a typical consumer to suffer detriment, or that detriment is likely to be more substantial.

Circumstances can include:

- personal circumstances, including factors such as living alone or being a lone parent); and
- wider circumstances, including living in rural areas, energy inefficient housing, not having access to gas etc.).

While there was general support for the OFGEM definition of vulnerability, some felt that the definition was too wide to be operational, nor did it aid in using finite resources to those in most need.

*“The definition of vulnerability is too wide, and doesn’t assist in directing limited resources to those who are suffering from energy poverty” – United Kingdom consumer advocate*

#### Is energy vulnerability and hardship the issue or symptom?

Energy hardship or vulnerability tends to be symptomatic of general financial hardship and/or poverty. Many, if not most, consumers struggling to meet their payments for electricity services, are likely to be having financial difficulties with respect to other aspects of life. Yet many of the initiatives to address challenges faced by vulnerable consumers were wholly contained within energy markets.

In Australia each retailer is responsible for developing their own hardship provisions, while Australian governments provide a host of concessions and payment to alleviate temporary financial

difficulties. In the United Kingdom, there are a myriad of discounts and payments available to vulnerable consumers, many directly provided by retailers as part of their licence agreement.

Short-term support for electricity bills to help vulnerable consumers may not address the underlying cause of the vulnerability. Many consumer advocates noted the poor energy efficiency of the housing stock, and the inability of vulnerable consumers to access energy efficient appliances due to the high upfront cost of those appliances.

*“We have some clients heating their houses with their electric stove because they can’t afford the price of a bar heater.” – Australian consumer advocate*

In the United Kingdom, larger energy suppliers are required to invest in energy efficiency programs to tackle energy poverty, under the Energy Company Obligation.

Other financial hardships have a significant impact on energy vulnerability, including those that may impact the credit worthiness of vulnerable consumers.

*“Many consumers in hardship remain on inappropriate tariffs or default tariffs due to a poor credit rating.” – Australian consumer advocate*

Temporary government payments cannot address the ongoing challenges associated with matters such as poor credit ratings. A more holistic approach is needed in dealing with energy vulnerability/hardship/poverty.

The Thriving Communities Partnership’s<sup>2</sup> approach to vulnerability is a good example of an holistic approach to this challenge. The Partnership is a cross-sectoral collaboration bringing together organisations from the energy, financial services, telecommunications and transport to ensure:

*“that everybody has fair access to the modern essential services they need to thrive in contemporary Australia.”*

The Partnership acknowledges the need for collective and holistic action to address vulnerability across all utilities and essential services.

## 6.2 Addressing hardship and vulnerability - Implications and recommendations

There does not seem to be an holistic view of the problem of energy vulnerability and hardship. Similarly there is not an overarching view of the efficacy of industry and government initiatives seeking to address energy vulnerability and hardship. There is no overarching goal or outcomes sought by industry or governments in terms of addressing hardship and vulnerability.

To address this issue, it is recommended that a national vulnerability/hardship strategy be developed through an inclusive process involving federal and state governments, industry stakeholders, and consumer advocate groups. Actions include the:

- establishment of an annual vulnerability/hardship summit to establish an agreed approach to the challenge amongst impacted stakeholders; and

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<sup>2</sup> See URL: <https://thriving.org.au/>

- completion of a vulnerability strategy (define vulnerability, review all measures trying to address vulnerability, placing energy vulnerability in the broader context of socio-economic disadvantage etc.).

#### Implications for regional and rural Australia

Any vulnerability/hardship strategy must acknowledge the increased vulnerability of regional and rural communities to changes in the affordability or reliability of electricity, and have specific initiatives to address this vulnerability. Regional and rural consumers and businesses pay more for electricity, due to increased network costs, and are more heavily impacted by reliability issues, such as blackouts and brown outs.

OFGEM's (2019) Consumer Vulnerability Strategy explicitly includes rural consumers within its strategy, noting that living in rural areas is an 'external circumstance' that contributes to vulnerability.

*"We have a statutory duty to consider the needs of people with disabilities, who are chronically sick, of pensionable age, on low income or living in rural areas." - OFGEM (2019)*

## 7. SUMMARY OF RECOMMENDATIONS

### Defining the concept of consumer outcome and triggers for intervention

The ultimate goal of the NEO is to drive better consumer outcomes, yet there is no clear or agreed upon definition for this concept. It is challenging to deliver on an unspecified outcome.

The paper recommends the NEO provide an explicit definition for consumer outcome, and market institutions/regulators develop metrics to assess the NEM's performance in achieving these outcomes. The paper highlights the Deloitte Access Economics (2019) assessment framework for market outcomes as a good starting point, where outcomes are assessed on:

- *Structure* – Metrics on competitiveness including concentration, barriers to entry etc.
- *Conduct* – quality of price and product offerings, consumers' willingness to engage in the market, resourcing of marketing v R&D etc.
- *Performance* – Metrics for consumer satisfaction and profitability measures for retailers.

### Understanding the drivers that promote positive consumer outcomes

The current market structure has been established based on principles and assumptions that may not hold anymore. The paper contends that:

- deregulated competitive retail markets have failed to maximise value for consumers;
- a focus on increasing the quantity of competition and consumer engagement will not be the panacea to better outcomes; and
- there is little empirical evidence of the relationship between deregulated competitive electricity markets and the increased dissemination and uptake of innovation.

The paper recommends:

- A more nuanced approach to consumer engagement and switching initiatives, noting that they are not the panacea in delivering consumer outcomes. The focus of such initiatives should be on consumers who stand to gain the most from engagement – vulnerable consumers.
- A deep dive into innovation to understand the conditions in which retail markets can deliver on innovation, and in turn, consumer value.

### Ensuring appropriate institutional arrangements

The market institutions and regulatory arrangements governing the NEM are overly complex and create duplication and a lack of responsibility and accountability. The sheer number of market institutions and regulators, and the associated consultation processes they create, is increasing the administrative costs for industry and consumer groups to engage in market reforms, which ultimately destroys consumer value.

The paper recommends that:

- A review be undertaken of regulatory and institutional arrangements for the NEM, as a part of existing reviews, including the Energy Security Board's Post 2025 Market Design review; and
- Consumer representative groups are resourced commensurate to the demands of new market reform and regulatory consultation and engagement processes;

#### [The development of an energy vulnerability strategy](#)

There is not an holistic view on the challenge of energy vulnerability and hardship. Similarly, there is no defined overarching goal our outcomes sought by industry or governments with respect to their hardship provisions.

The paper recommends that a national vulnerability/hardship strategy be developed through an inclusive process involving federal and state governments, industry stakeholders, and consumer advocate groups. Actions include:

- establishment of an annual vulnerability/hardship summit to establish an agreed approach to the challenge amongst impacted stakeholders; and
- the completion of a vulnerability strategy (define vulnerability, review all measures trying to address vulnerability, placing energy vulnerability in the broader context of socio-economic disadvantage etc.).

#### [A bespoke approach to regional and rural Australia](#)

Regional and rural Australia must determine whether they are best served by a centralised one-size-fits-all approach to electricity rules and regulations, as provided by the NEM. The paper suggests that these communities obtain the least benefit from the current market structure, and the regulatory and institutional frameworks that govern the NEM is not primarily focussed on maximising outcomes for these consumers.

Regional and rural consumers pay more for electricity than urban consumers, and given the disparity in household income, changes in the price of electricity have a greater negative impact on these users.

To address these issues, the paper recommends:

- consideration of the costs and benefits of separate market arrangements for regional and rural areas, including the potential for a vertically integrated electricity system for rural and regional communities; and
- that any vulnerability/hardship strategy acknowledge the increased vulnerability of regional and rural communities to changes in the affordability or reliability of electricity, and have specific initiatives to address this vulnerability.

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