

# Strategic Priorities for Energy Market Development

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2013

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In December it will be 15 years since the National Electricity Market (NEM) was created. The market has faced numerous challenges and opportunities in that time and has coped well with all of these developments. Yet the industry now faces greater challenges and uncertainties than at any time since the NEM started.



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John Pierce CHAIRMAN

### **Chairman's Foreword**

**I am pleased to present the Australian Energy Market Commission's (AEMC) strategic priorities for energy market development.**

**The AEMC is the rule maker for, and developer of, Australian energy markets. As a national, independent body we make and amend detailed rules for the National Electricity Market (NEM) and for elements of natural gas markets. To further support development of these markets, we also provide advice to the Council of Australian Governments' Standing Council on Energy and Resources (SCER).**

Our objective is to promote efficient, reliable and secure market frameworks for energy services which serve the long-term interests of consumers. Accordingly, our work reflects the view that effective competition at wholesale and retail levels, together with effective regulation for transmission and distribution, are the best ways of delivering these outcomes.

The energy prices and other outcomes that consumers see result not only from rules applied to the energy sector but also from government policies impacting it. The 'market priority' section of this document thus emphasises the importance of consulting relevant stakeholders when developing policy in this area.

In December it will be 15 years since the National Electricity Market (NEM) was created. The market has faced numerous challenges and opportunities in that time. For example, we have seen the abolition of one NEM region (Snowy) and the entry of another (Tasmania), a change of governance structure, changes in industry structure, new entry at retail level, timely investment in generation capacity, new network regulation rules and a global financial crisis (GFC).

The market has coped well with all of these developments. Yet the industry now faces greater challenges and uncertainties than at any time since the NEM started. Government environmental policies, a fall in demand growth, significant rises in retail prices and higher cost of capital since the GFC have changed the landscape of the energy industry in recent years and made forecasting the future more difficult for customers and investors.

The AEMC assumed its first rule-making powers for the gas sector in 2008, and has since then increased its focus on this sector. The gas market has perhaps confronted fewer shocks than the NEM but now faces its most significant period of change, namely the development of LNG facilities for export from Gladstone. As we describe later in this report, we have recently published a scoping study on the gas market. The study identifies areas of potential improvement in the market and regulatory arrangements that may benefit from future market development work.

The positive engagement of stakeholders in preparing this document confirms the value of using a consultative process to develop our strategic priorities. It also reflects the AEMC's responsibility to carry out our work in a transparent, predictable way.

Given the widespread support for the three priorities proposed in our discussion paper, we confirm these as our refined set of priorities for energy market development. The priorities are:

*Strengthening consumer participation and continuing to promote competitive retail markets*

Our **consumer priority** recognises the changing role of consumers in energy markets. Empowered consumers can benefit from, and contribute to, the effective functioning of the electricity and gas sectors.

*Promoting the development of efficient gas markets*

Our **gas priority** considers whether the gas market and regulatory frameworks will continue to promote the efficient allocation of gas and investment in gas infrastructure, in light of the developing LNG export industry.

*Market arrangements that encourage efficient investment and flexibility*

Our **market priority** emphasises the importance of market and regulatory arrangements that are predictable, transparent and responsive to changing market and external circumstances.

These priorities will underpin our work, helping to guide our advice to COAG and our approach to rule making. I would like to thank all those who attended the stakeholder forums and made written submissions. We value all views and contributions. They have helped to shape this document and the way we approach our work.

**John Pierce**  
Chairman

# 1

## 1. Introduction

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Our refined strategic priorities will guide our market development work and inform the advice we provide to governments.

**This is the AEMC’s second review to develop strategic priorities for energy market development. The two years since our first review have brought considerable change, in the energy market and in our work program.**

We have seen the introduction of a carbon price, a significant slowing in electricity demand growth, an increase in distributed generation, and progress in developing LNG export facilities in Queensland. In addition, state and territory governments have implemented other changes affecting the energy market. These include steps to further deregulate gas and electricity retail markets.

The AEMC has made substantial progress with many projects connected to the strategic priorities established in 2011. We have completed a major change to the rules for electricity and gas network regulation. We have also provided final reports to the SCER for our Power of Choice Review and Transmission Frameworks Review.

These developments in our work program, as well as the external environment, have informed this second strategic priorities review.

The discussion paper for the review was published in April 2013. It described in some detail developments in the energy sector, our views on issues facing the sector, and the challenges these present for market participants, market bodies, governments and consumers.<sup>1</sup> This final report does not repeat that discussion but summarises stakeholder feedback and reaction. It also sets out relevant developments since April 2013.

The discussion paper proposed consumer, gas and market priorities. Most stakeholders supported our focus on these three areas. Contributions from workshops and submissions allowed us to refine the priorities, which are retained in this final report. They are:

- strengthening consumer participation and continuing to promote competitive retail markets (consumer priority)
- promoting the development of efficient gas markets (gas priority)
- supporting market arrangements that encourage efficient investment and flexibility (market priority).

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<sup>1</sup> Australian Energy Market Commission, *Strategic Priorities for Energy Market Development*, Discussion Paper, AEMC, April 2013.

Each chapter in the final report sets out the key issues raised by stakeholders in relation to the three priorities and discusses how the AEMC plans to help address those priorities within its remit as rule maker and market developer.

### **Process for this review**

Initial consultation took place in August 2012 at the University of New South Wales, at a public forum held in collaboration with the Australian Energy Research Institute. The forum provided an opportunity for discussion between the AEMC and stakeholders on the challenges facing the energy market. It included presentations from a range of stakeholders.<sup>2</sup> The views expressed at the public forum informed the April 2013 discussion paper.

During the consultation period following publication of the discussion paper we held three stakeholder workshops, in Sydney, Brisbane and Melbourne. A summary of discussions at these workshops is available on the AEMC website.<sup>3</sup>

We received 18 submissions in relation to the discussion paper. These, together with the workshop discussions, have informed the final report.

### **Work program**

Our refined strategic priorities will guide our market development work and inform the advice we provide to governments.

Our current program includes a number of projects that are relevant to the three priorities. Each of the projects is described in the relevant priority chapter and their expected timeframes are set out in table 1 overleaf.

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2 <http://www.aemc.gov.au/Market-Reviews/Open/strategic-priorities-for-energy-market-development-20123.html>

3 <http://www.aemc.gov.au/Market-Reviews/Open/strategic-priorities-for-energy-market-development-20123.html>

Table 1 – Timeframes of relevant projects

		2013				2014			
Consumer priority		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
National framework for distribution reliability review				Consultation Paper & Final Report					
National framework for transmission reliability review				Consultation Paper	Final Report				
Linking the NEM Reliability Parameters with VCR					Consultation Paper & Final Report				
Annual Network Pricing Arrangements					Consultation Paper		Draft Determination	Final Determination	
Distribution pricing principles rule change request					Consultation Paper		Draft Determination likely	Final Determination likely	
Wholesale market demand side response mechanism	Pending rule change request								
2013 Retail Pricing Trends Report					Final Report				
Best Practice Regulated Retail price Setting				Draft Report & Final Report					
Connecting Embedded Generators			Draft Determination		Final Determination				
Retail Competition Review of NSW			Draft Report		Final Report & Supplementary Report				
POC - Review of Electricity Customer Switching					Draft Report	Final Report			
<b>Gas priority</b>									
Gas market scoping study			Draft Report	Final Report					
<b>Market priority</b>									
Transmission Frameworks Review		Final Report							
National framework for distribution reliability review				Consultation Paper & Final Report					
National framework for transmission reliability review				Consultation Paper	Final Report				
Linking the NEM Reliability Parameters with VCR					Consultation Paper & Final Report				
Reliability Standard and Settings Review 2014					Draft Report		Final Report		
Reliability Panel - MPC Review					Draft Report	Final Report			
NEM Financial Market Resilience			First Interim Report			Second Interim Report	Final Report		
Negative Offers from Scheduled Network Service Providers				Draft Report	Final Report				
Network Service Provider Expenditure Objectives			Draft Determination	Final Determination					

### Next steps

We intend to review our priorities and associated work program regularly. We will continue to monitor developments in the electricity and gas markets and the external environment to ensure our strategic focus remains appropriate for the future developments in energy markets in Australia.

## 2. Consumer priority: Strengthening consumer participation and continuing to promote competitive retail markets

### How does this priority benefit consumers?

Effective consumer participation can contribute to more efficient markets and help consumers manage how much they spend on energy. Competitive retail markets promote choice and value for consumers, by providing incentives for retailers to minimise costs and prices, and to offer a range of tariffs.

This priority aims to empower consumers to participate in regulatory and policy processes, voice their demand for energy services and choose options right for them.

### Introduction

This priority is about enabling consumers to participate confidently in all parts of the energy supply chain – the retail, generation and network sectors. It concentrates on implementation, because considerable policy analysis has already identified improvements in demand-side participation, retail competition and consumer representation in developing policy and regulation. Governments and energy market bodies are now focused on how best to implement recommendations resulting from this work.

The priority reflects an environment in which consumers are presented with greater opportunities for active participation as technologies advance, retailers differentiate their offerings and competition increases. For example, advanced metering technology is providing richer consumption information and more service possibilities. Distributed generation is blurring the traditional delineation between consumers and producers of electricity. Options for demand-side participation are increasing in retail and generation markets.

A public report by Accenture on ‘the new energy consumer’ describes some of the global changes under way for consumers in energy markets.

*While consumers have traditionally been defined as a “bill payer attached to a fixed premise” consuming energy, tomorrow’s providers must think of them as much more than just the bill payer. Cross-channel approaches, including social networking and mobile devices directed at the “right” segments, will enable new energy products and services that meet consumers’ lifestyle demands for convenience, simplicity and technological innovation.<sup>4</sup>*

We expect innovation in energy service models and associated technologies to provide more opportunities for consumer participation, as well as greater service choice. It is critical in this environment that consumers are equipped to compare options and make choices that best meet their needs. They must have access to effective tools and information to support their decisions, with the right protections and access to assistance if required.

<sup>4</sup> Accenture, *Revealing the Values of the New Energy Consumer*, Accenture end-consumer observatory on electricity management, 2011, p 41.



Changes relevant to consumers are also occurring outside the competitive retail and generation parts of the energy sector. New avenues are opening up for greater consumer participation within energy policy and regulation, such as more opportunities for customers to voice their preferences in setting required levels of electricity reliability.

Collectively, these trends promote a more active role for consumers across the wholesale, network and retail sectors of energy markets.

### **Why is this important?**

It is important that energy markets serve consumer need. For this to happen, consumers must be able to make their needs heard and be well equipped to make decisions about energy use. This priority aims to empower consumers to participate in competitive retail markets and in helping to develop regulations and policy.

Consumer participation in the energy sector takes a number of forms. It includes the ability to shop around for energy plans, install distributed generation, or manage energy use with supporting equipment, technology or third-party options.

For example, consumers can choose from a range of providers and service offers in the energy retail market. In NSW, urban customers can choose up to 50 different offers from 12 retailers. In regional NSW, customers can choose from over 34 offers from nine retailers.<sup>5</sup>

That said, we recognise that not all consumers will choose an active role. The consumer priority will support consumers in selecting energy services that suit their needs. It will also help to promote more efficient market outcomes more broadly. Here, effective participation from both supply and demand sides should result in the lowest cost options, thereby promoting the long-term interests of all consumers.

In addition, enabling consumers to make informed choices about the way they use electricity can lead to more efficient investment across both demand and supply sides. For example, consumer participation leading to a reduction in peak demand would contribute to lower generation and network costs, in turn minimising what consumers pay for energy.

In the context of regulated monopoly networks, consumer participation could promote better outcomes in policy and regulatory processes administered by governments and energy market bodies. The outcomes of these processes ultimately impact the prices consumers pay for energy. With respect to the AEMC's role in the market, this particularly concerns how rules are drafted and implemented for network determinations made by the Australian Energy Regulator (AER), and how governments determine network reliability settings.

### **Sector developments**

The discussion paper set out our views on the issues that the consumer priority seeks to address. In particular, it highlighted what governments and market bodies must do so that consumers can see the benefits of work undertaken to date. For example, changes are required to some aspects of how the supply side of the electricity market operates and how it interacts with consumers; and consumers need to be sufficiently informed and empowered to exercise choice.

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The consumer priority will support consumers in selecting energy services that suit their needs.

<sup>5</sup> Australian Energy Market Commission, *Review of Competition in the Retail Electricity and Natural Gas Markets in NSW*, Draft Report, AEMC, May 2013.

### *Stakeholder views on the developments*

Issues raised in submissions to the AEMC, and our response, are set out in Appendix A. Some of the key issues raised at workshops and in submissions were:

- *Competitive energy retail markets through price deregulation*: Submissions from a number of retailers and network businesses signalled their support for retail price deregulation in competitive retail markets.<sup>6</sup> The Energy Networks Association (ENA) submission noted that consumers benefit where effective competition enables retail price caps to be removed.
- *Demand-side response and flexible pricing options*: A number of stakeholders indicated support for greater demand-side participation in response to market signals.<sup>7</sup> Alinta Energy strongly endorsed our view that consumers would be best served by having access to more information, by efficient and flexible pricing options, and by increasing the ease of switching between providers.
- *Consumer empowerment*: A range of stakeholders agreed with our view that consumers need to be better empowered to make more informed decisions around energy usage.<sup>8</sup> The Energy & Water Ombudsman of New South Wales (EWON) endorsed proposals for strengthening consumer participation and continuing to develop opportunities to allow consumer choice in the energy market. It pointed to the AEMC's Power of Choice process as providing a strong policy base for the staged implementation of significant consumer focused reforms. The Energy Retailers Association of Australia (ERAA) noted that consumer engagement measures would not succeed if they were too prescriptive. Instead, flexible arrangements are required to ensure that the benefits of choice are enjoyed by all consumers.
- *Solar photovoltaic (PV)*: The recent increase in rooftop solar PV was one of the most frequently raised topics in stakeholder workshops and submissions.<sup>9</sup> Two common issues were:
  - the structure of network tariffs and the impact on the network costs paid by those with and without solar
  - subsidies, such as feed-in tariffs, for renewable energy, and the inequity of cross-subsidisation across consumers with and without solar PV.
- *National Energy Customer Framework (NECF)*: Origin Energy submitted that a number of recent market developments, including the NECF, were likely to result in better outcomes for consumers.<sup>10</sup> EnergyAustralia noted that, as the market becomes more sophisticated, there is a tendency to increase the regulatory burden, and for consequent unnecessary costs to go unchecked. One important way to minimise the regulatory burden is to ensure a high degree of consistency across NEM regions. It believed that the intention of the NECF in this regard would be enhanced by limiting regional derogations as far, and as soon, as possible.<sup>11</sup>

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6 EnergyAustralia, *discussion paper submission*, p.1; AGL, *discussion paper submission*, p.1; Alinta Energy, *discussion paper submission*, p.5; Origin Energy, *discussion paper submission*, p.1; ENA, *discussion paper submission*, p.2; ERAA, *discussion paper submission*, p.1.

7 AGL, *discussion paper submission*, p.1; Alinta Energy, *discussion paper submission*, p.4; GDF Suez, *discussion paper submission*, p.3.

8 EWON, *discussion paper submission*, p.2; GDF Suez, *discussion paper submission*, p.3; ERAA, *discussion paper submission*, p.1; Origin Energy, *discussion paper submission*, p.1; Hydro Tasmania, *discussion paper submission*, p.2.

9 Energy Efficiency Council, *discussion paper submission*, p.1-2; Sligar and Associates, *discussion paper submission*, p.1; GDF Suez, *discussion paper submission*, p.3; SACOSS, *discussion paper submission*, p.2; Origin Energy, *discussion paper submission*, p.1; Alinta Energy, *discussion paper submission*, p.2; Sydney, Brisbane and Melbourne workshop discussions.

10 Origin Energy, *discussion paper submission*, p.1.

11 EnergyAustralia, *discussion paper submission*, p.1.

- *Energy affordability*: Some stakeholders raised the issue of affordability. EWON suggested that the AEMC could commission research on the NEM into community service obligations and their effectiveness. It suggested a need for social policy research to provide an evidence base for identifying best practice policy.<sup>12</sup> The South Australian Council of Social Service (SACOSS) would like to see us using our strategic priorities review to take a leadership position on social and energy policy interface issues.<sup>13</sup>

Since the publication of the AEMC's strategic priorities discussion paper in April 2013, there have been developments which could affect this priority. These are discussed below.

#### ***Retail price deregulation***

The discussion paper noted that energy retailers in all jurisdictions other than Victoria and South Australia are subject to retail price regulation. Since publishing the discussion paper, the Queensland Government has announced that it will remove retail price regulation for consumers in southeast Queensland from 1 July 2015.

In October 2013, we published our final report for the Review of Competition in Retail Electricity and Natural Gas Markets in NSW.<sup>14</sup> The report recommended a package of measures to further enhance competition, including removing retail price regulation, improving information for consumers, maintaining consumer protections and ongoing market monitoring. This is discussed in further detail below.

#### **Key issues for this strategic priority**

##### ***Competitive retail markets***

Competitive retail markets with strong consumer protections provide a basis for innovation, product choice and competitive pricing. Deregulation of retail prices in competitive markets gives retailers greater flexibility and incentive to develop and offer a wide range of innovative products, including new demand-side products.

Increased consumer participation in the market will increase competition. Our review of competition in the NSW retail energy markets found that more could be done to make consumer participation easier. The review focused on NSW, but some of its findings could be relevant to other parts of Australia. It recommended a number of measures to support increased choice. The most important of these are tools and knowledge to help consumers better understand and compare the offers they receive. In addition, targeted communication channels will need to evolve with the market.

We recognise that not all consumers participate in energy markets by shopping around or switching energy plans. However, we need to make it easier for those who would like to switch to understand and compare offers. We are therefore releasing a supplementary consumer engagement blueprint in October 2013, with recommendations to help consumers access the information they need to choose an energy plan that best suits them.

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Competitive retail markets with strong consumer protections provide a basis for innovation, product choice and competitive pricing.

<sup>12</sup> EWON, *discussion paper submission*, p.1.

<sup>13</sup> SACOSS, *discussion paper submission*, p.3.

<sup>14</sup> Australian Energy Market Commission, *Review of Competition in the Retail Electricity and Natural Gas Markets in New South Wales*, Final Report, AEMC, October 2013.

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We need flexible, cost-reflective electricity prices to deliver efficiencies and minimise the cost of our electricity system over the longer term.

### *NECF jurisdictional derogations*

Our discussion paper highlighted that the National Energy Customer Framework (NECF) should facilitate an increase in retail competition by reducing regulatory complexity, and lowering barriers for energy retailers across participating states and territories to enter into the market. Some states are yet to adopt the national framework and there are a number of jurisdictional differences in the legislation ('derogations') for the states that have. The stated aim of the associated laws and rules<sup>15</sup> is national consistency in the medium to long term for all stakeholders in the energy market.

The NECF is still in the early stages of operation, with retailers and other stakeholders having only recently implemented extensive changes to their operational and IT systems to work within the existing NECF requirements. Given that, we understand that some stakeholders are unlikely to support further changes in the immediate future. We also recognise that some derogations may be necessary where warranted by important interstate differences. There may, however, be benefit in jurisdictions considering changes over the medium term. These changes could focus on greater national consistency and thus promote the original intent of a national framework.

The AEMC is in the process of mapping the NECF rules framework and its application in each jurisdiction to help guide stakeholders in navigating rules and derogations. This is a small first step towards possibly assessing the efficiency of and improvements to current arrangements. We would only consider undertaking more extensive assessments over the medium term following consultation with SCER and other stakeholders.

### *Demand-side participation and flexible pricing*

For consumers to manage their energy consumption and make decisions about electricity services they require, they need to be able to access information which allows them to assess costs and benefits. Retailers, as the primary interface with consumers, will play an important role in providing this information, as will other energy service providers. Equally, governments and regulatory bodies have a role to play in informing consumers about energy markets and demand-side options<sup>16</sup> available.

The AEMC's Power of Choice review recommended a package of changes to provide households, businesses and industry with more opportunities to make informed choices about the way they use electricity and manage expenditure. Certain market conditions, including efficient and flexible pricing structures, must exist in order to achieve this.

Most consumers, particularly residential and small business consumers, do not pay electricity prices that reflect the true costs of how much electricity they consume, and when. We need flexible, cost-reflective electricity prices to deliver efficiencies and minimise the cost of our electricity system over the longer term.

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<sup>15</sup> National Energy Retail Law and the National Energy Retail Rules.

<sup>16</sup> Demand side options are actions available to consumers - or to intermediaries acting as agents of consumers - to reduce or manage their electricity use. Examples include peak shifting, electricity conservation, fuel switching, utilisation of distributed generation and energy efficiency.

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Stakeholders are concerned that network costs of consumers with solar PV are cross-subsidised by other consumers, due to current inefficiencies in network tariffs.

The Power of Choice review provided SCER with an implementation plan to gradually phase in efficient and flexible pricing options, including changes to distribution pricing principles, a segmented phasing-in of retail pricing options, government reviews of energy concession schemes and the use of interval data in settlement. SCER has agreed in principle to these recommendations and is considering implementation details.

The South Australian Council of Social Service (SACOSS) submitted that a matter of significant concern is that the reform agenda does not ensure preservation of a formal public policy link between market outcomes and 'social and equity issues'.<sup>17</sup> This was deemed to be more of a concern than the prospect that a focus on economic efficiency and cost reflective pricing may reduce affordability. In our view, it is important to promote greater links between energy and other policy areas, including social policies on affordability. The importance of effective policy process is discussed further in the market priority chapter.

While governments are responsible for social policies, the AEMC contributes by providing advice to inform policy decisions. The Power of Choice Review is a good example of this. As part of the package of recommendations, we recommended that state governments review their energy concession and rebate schemes so that such schemes are appropriately targeted and could enable a transition to more flexible pricing. This is to ensure adequate information and protections are in place for those consumers with limited capacity to respond or change their consumption.<sup>18</sup>

#### *Distribution network tariffs*

The AEMC discussion paper briefly examined the need for more flexible retail prices and issues associated with distribution tariff structures. This report expands on these points as they relate to a number of stakeholder concerns about the impact of solar PV. In particular, stakeholders are concerned that network costs of consumers with solar PV are cross-subsidised by other consumers, due to current inefficiencies in network tariffs.

Consumers with distributed generation need to draw power from the networks to supply some of their energy, unless they are self-sufficient, with energy storage or distributed generation able to meet all their energy needs. The network essentially acts as a 'standby' source of power when the distributed generation is not running (for example at night for solar PV panels) or cannot supply these consumers' full requirement for power. Where tariffs are based on the volumes of energy drawn from the grid, such consumers benefit from having the network infrastructure available without paying as much for that network as those without solar PV.

An indicative breakdown of the true costs of supplying electricity to consumers with and without distributed generation is set out in table 2 overleaf. Many of these costs are not reflected in the prices paid by consumers with distributed generation.

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<sup>17</sup> SACOSS, discussion paper submission, p.3.

<sup>18</sup> Australian Energy Market Commission, *Power of choice review – giving consumers options in the way they use electricity*, Final Report, AEMC, November 2012.

Table 2 – Underlying costs of supplying electricity – with and without distributed generation

Costs	Consumer without distributed generation	Consumer with distributed generation (DG) <sup>19</sup>
Generation	<ul style="list-style-type: none"> <li>NEM generation costs<sup>20</sup> - varies according to the fuel type and technology dispatched in each 5 minute interval</li> </ul>	<ul style="list-style-type: none"> <li>Distributed generation costs (technology purchase, installation, maintenance and fuel costs<sup>21</sup>)</li> <li>NEM generation costs when DG is not generating</li> <li>Feed-in tariff payments to owner</li> </ul>
Networks	<ul style="list-style-type: none"> <li>Costs of building sufficient transmission and distribution network capacity to reliably supply the consumer</li> </ul>	<ul style="list-style-type: none"> <li>Costs of building sufficient transmission and distribution network capacity to reliably supply the consumer when DG is not generating or consumption exceeds DG generation</li> <li>In some cases, additional costs to manage export flows from DG</li> </ul>
Retail	Retailer fee, including costs of: <ul style="list-style-type: none"> <li>metering technology</li> <li>meter reads &amp; billing systems</li> <li>other operational costs</li> <li>renewable energy target certificates</li> </ul>	Retailer fee, including costs of: <ul style="list-style-type: none"> <li>two-way metering technology</li> <li>net billing capability</li> <li>other operational costs</li> <li>renewable energy target certificates</li> </ul>

We adopt a technology-neutral approach and have considered this issue from the perspective of market frameworks that promote efficient investment decisions.

Distributed generation can offer a series of benefits to all consumers – not just those who possess the technology. Depending on the timing of generation and the location, direct system benefits can include reducing line losses and deferring the need for more network infrastructure. This can result in lower electricity prices for all. However, the full costs and benefits of distributed generation are not always reflected in the prices consumers pay for electricity. This issue extends beyond distributed generation and is one on which the AEMC has focused in previous work to promote greater efficiency in the NEM.

We adopt a technology-neutral approach and have considered this issue from the perspective of market frameworks that promote efficient investment decisions. Where possible, the prices that consumers pay for electricity supply should closely reflect the true costs of their consumption, irrespective of whether the electricity is supplied through the NEM wholesale pool or by distributed generation.

The AEMC’s Power of Choice Review noted that most consumers (with or without distributed generation) are not paying prices that reflect the underlying costs and benefits of supply. This is due to current network and retail tariff structures and the limited availability of real-time metering data. The review set out a series of recommendations to help the transition to more flexible pricing. An essential first step is to change the way networks recover their costs through network prices.

Following the Power of Choice recommendations, we received a rule change request from SCER proposing changes to distribution pricing arrangements in the National Electricity Rules. The request specifically addresses current incentives and levels of guidance within the rules, for network businesses to set cost-reflective network pricing structures and charges for consumers. It addresses some issues similar to a rule change proposed by the Independent Pricing and Regulatory Tribunal of NSW

19 DG can include solar PV, diesel generators, micro wind and micro hydro.

20 NEM spot prices and contract prices.

21 Fuel costs should be zero for solar PV.

(IPART) including consultation on the development of network tariffs and the need for a better approval process for annual network price changes.<sup>22</sup>

*Enhancing consumer representation in policy and regulatory processes*

Another aspect of consumer participation in energy markets involves their representation or advocacy in policy and regulatory processes. A range of new opportunities for consumer participation in these processes are currently being developed and implemented.

The AEMC's Review of Frameworks for Transmission and Distribution Reliability is examining ways to better reflect the value consumers place on reliability in planning transmission and distribution investment. Network reliability is currently regulated differently in each jurisdiction. Our advice will set out a framework for developing reliability standards that can be adopted in all jurisdictions in the NEM.

According to the terms of reference for the review, reliability standards under the national framework need to take account of the trade-off between the costs of investing in, and maintaining, transmission and distribution networks (and non-network solutions), and reliability outcomes. The value customers place on reliability can then be used to guide selection of the appropriate reliability target, in light of this trade-off. This could lead to more efficient investments by network businesses and electricity prices more consistent with the value that customers place on reliability. The explicit and transparent consideration of the value customers place on reliability, along with greater requirements for stakeholder consultation when reliability levels are set, are likely to ensure community preferences are taken into account.

Following the AEMC's network regulation rule changes in 2012, the AER is undertaking a Better Regulation program. It has published a series of guidelines for consultation, including a draft guideline setting out best practice principles for network businesses to engage with consumers as part of their regulatory determination process. The AER has established a consumer reference group to make it easier for other consumer representative groups to have input into the Better Regulation consultative process.

In July 2013, the AER established a Consumer Challenge Panel to help incorporate the interests of consumers into decisions on network costs.<sup>23</sup> In addition, and following in-principle agreement of the Council of Australian Governments (COAG), SCER is developing a proposal for a national energy consumer advocacy body, to be established by 1 July 2014. The body is intended to increase consumer advocacy on national energy market matters of strategic importance and of material consequence for energy consumers, particularly households and small businesses.<sup>24</sup>

The SCER rule change on distribution pricing arrangements, discussed in the previous section, also seeks to improve existing consultation requirements for network businesses, so retailers and consumer groups have a greater opportunity to consider and influence network charges as well as the structure of those charges.

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The explicit and transparent consideration of the value customers place on reliability, along with greater requirements for stakeholder consultation when reliability levels are set, are likely to ensure community preferences are taken into account.

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<sup>22</sup> The Power of Choice review recommended solutions that are different from those proposed by IPART. The IPART rule change process has been extended to consider these different solutions in more detail and allow for additional stakeholder consultation in the remaining stages of the process.

<sup>23</sup> <http://www.aer.gov.au/about-us/consumer-challenge-panel>

<sup>24</sup> <http://www.scer.gov.au/workstreams/energy-market-reform/national-energy-consumer-advocacy-body/>

Network businesses, in presenting their network regulatory proposals at the start of the AER's revenue determination process, would have to provide a statement of how they propose to structure network charges. This means that formal consultation on network pricing structures would become part of the regulatory determination process and that pricing structures would need to be approved by the AER as complying with pricing principles.

Pricing structures would thus form part of the new requirement, implemented as part of the network regulation rule change, for network businesses to show how they have engaged with stakeholders and how they have addressed relevant concerns emerging from consultation. After the regulatory determination, any changes to pricing structures during the regulatory period will need to be developed in consultation with consumers. The AEMC will consider these proposals for enhanced consultation during its assessment of the rule change request.

### **Work to progress this priority**

As mentioned above, much of the current AEMC program is at implementation stage and can help to substantially progress this priority. The work program which covers consumer engagement for networks, generation and retail sectors is set out below:

#### ***Reviews of the national framework for distribution reliability and transmission reliability***

In February 2013, SCER directed the AEMC to conduct a review of the national framework for transmission and distribution reliability. The review has two workstreams, to develop a national framework and methodology for:

- distribution reliability requirements in the NEM (distribution workstream)
- transmission reliability standards in the NEM (transmission workstream).

The final report for the transmission workstream is expected in November 2013.

The final report for the distribution workstream was published in September 2013 and recommends a framework which promotes greater efficiency, transparency, and community consultation in how reliability levels are set and provided across the NEM. In particular the framework would:

- compare the costs of building and maintaining electricity networks against reliability outcomes. The costs to customers of interruptions to supply can then be used to guide the setting of reliability targets
- provide an independent process that separates the body responsible for providing reliability from the body responsible for setting reliability targets
- set reliability targets ahead of the need to invest, to provide transparency and certainty to market participants regarding the level of reliability they can expect to receive and to increase the accountability of network businesses for the level of reliability provided
- provide consistent national expression of how measuring reliability in distribution networks will allow customers to better understand how electricity costs relate to levels of reliability.



### ***Advice on linking the NEM reliability parameters with the value of customer reliability***

In its submission, SACOSS called for the AEMC to take a leadership role on the value of customer reliability as it considers this is currently being treated in disparate ways by AEMC, AER, the Australian Energy Market Operator (AEMO) and jurisdictional regulators.<sup>25</sup>

In response to AEMC recommendations in its review of the effectiveness of NEM security and reliability arrangements in light of extreme weather events, SCER asked us to provide advice on linking the value of customer reliability to reliability standards and settings. We will publish a consultation paper in October 2013.

### ***AEMC rule change: Annual network pricing arrangements***

On 6 June 2013 the AEMC commenced a rule change request, received from IPART, on network pricing arrangements. IPART identified three problems with the current network pricing process. They relate to process timing, a lack of consultation and certainty of forward network prices.

The rule change request includes a proposal to require the AER to develop guidelines outlining how distribution businesses should consult with retailers and consumers in developing their network prices and their statement of expected price trends. To provide additional certainty to retailers and consumers about changes to future prices IPART proposed that, before approving network price changes, the AER must consider whether annual pricing proposals submitted by these businesses were consistent with expected price trends. A final determination is expected in mid-2014.

This rule change intersects with recommendations of the Power of Choice review and the rule change request from SCER (below) on distribution pricing arrangements.

### ***SCER Distribution pricing arrangements rule change request***

This rule change request submitted by SCER follows from the Power of Choice Review. It seeks to improve the clarity of, and strengthen, existing pricing principles to ensure prices are developed and set based on long-run marginal cost. It also proposes to improve existing consultation requirements and to make other changes to give the AER sufficient time and opportunity to assess pricing proposals. The request was received on 18 September 2013 and the rule change process is expected to commence by the end of 2013, with the publication of a consultation paper.

### ***Power of Choice implementation***

SCER has committed to submit rule change proposals to implement many of the recommendations of the Power of Choice review. These include rule changes relating to access to consumer data and metering arrangements. SCER has also asked AEMO to draft rules to implement a demand-response mechanism.

In a July 2013 report to COAG, SCER set out its progress on implementing an energy market reform package which included a number of the Power of Choice recommendations.<sup>26</sup>

### ***Electricity price trends***

The AEMC will continue to produce its annual report on the drivers of residential electricity prices. For the 2013 report, SCER has directed us to examine electricity price trends for the years 2013/14 to 2015/16, with 2012/13 as a base year for comparison.

<sup>25</sup> SACOSS, discussion paper submission, p.2.

<sup>26</sup> <http://www.scer.gov.au/files/2013/07/Progress-Report-Mid-2013.pdf>

In contrast to previous years, we have been directed to consider trends in market offer prices as well as standing offer prices. SCER has requested that we publish this report by the end of 2013.

#### ***Best practice retail price regulation methodology***

SCER asked the AEMC to develop a recommended method for setting regulated retail electricity prices for small customers. Jurisdictions are able to decide whether to adopt the new methodology. The final report was published in September 2013.

Our recommended method builds on a number of the current approaches taken by jurisdictional regulators. The impact on the level of regulated retail prices depends on how regulators implement the recommended method.

Where a regulated retail price is maintained, we consider that a stable regulatory framework and method is important for the effective operation of the wholesale and retail sectors. A consistent approach reduces regulatory risk for retailers and promotes competition, leading to long-term benefits for consumers.

#### ***Connecting embedded generators***

On 14 June 2012, the AEMC initiated a rule change request from ClimateWorks Australia, Seed Advisory and the Property Council of Australia. It aims to reduce barriers to the connection of embedded generators to distribution networks. It provides a clear, more transparent connection process with defined timeframes, and requires distribution businesses to publish information to assist embedded generators. We published a draft rule in June 2013 and expect to publish our final determination in December 2013.

#### ***New South Wales retail review***

In October 2013 The AEMC published its final report for a review on the effectiveness of competition for electricity and natural gas customers in NSW. The review found that competition delivers benefits to NSW consumers, giving them a choice of retailer and a choice of product or service. We are recommending a package of measures to further enhance competition. They include removing retail price regulation, improving information for consumers, maintaining consumer protections and ongoing market monitoring.

Part of this review involved the AEMC developing a consumer engagement blueprint, to be published in October 2013. The blueprint, based on consumer market research in NSW, provides the State Government with advice on how to inform and empower consumers while completing implementation of a competitive national energy market.

#### ***Electricity customer switching***

In June 2013 SCER provided terms of reference to the AEMC for a review of existing retailer switching arrangements. The aim is to better support consumer choice and to make it more efficient for consumers to switch retailers. The Switching Review originates from a recommendation made to SCER in the Power of Choice review. The AEMC expects to consult publicly on a draft report in December 2013, before finalising its recommendations for SCER by 31 March 2014.

# 3. Gas priority: promoting the development of efficient gas markets

## How does this priority benefit consumers?

A reliable, competitive and secure gas market allows efficient and timely investment in gas infrastructure and the supply of gas at least cost to consumers.

A strategic plan for gas market development will ensure that the frameworks for trading gas and for pipeline capacity continue to meet the commercial needs of participants as the market evolves. This will minimise transaction costs and therefore overall costs for consumers.

## Introduction

This priority considers whether the gas market and regulatory frameworks will continue to promote the efficient allocation of gas and investment in gas infrastructure, in light of the expanding liquefied natural gas (LNG) export industry. It represents the most notable change to our strategic priorities and reflects stakeholders' renewed focus on the efficiency of the gas supply chain.

We recognise that work undertaken as part of this priority will not address upstream supply-side issues currently facing the east coast gas market. Nonetheless, we acknowledge the importance of gas markets and pipeline regulation to the efficiency of the natural gas supply chain. As the market grows and evolves it is important to take stock and consider whether current arrangements will continue promoting the national gas objective.<sup>27</sup>

Overall, we believe that existing gas market arrangements have served us well, and there appears to be no need for material reform. Tightening of the supply/demand balance is putting upward pressure on gas prices but there is evidence that new gas supply contracts are being made available during this period of adjustment. However, we acknowledge that limited transparency around gas contract formation for those outside the industry may be causing concern for some consumers and policy makers.

In general, stakeholders acknowledge that a new supply/demand dynamic is facing the east coast gas market and that there will be a period of transition as the market adjusts. There is, however, uncertainty around how the commercial needs of participants may change and what the impact on consumers will be. As a result, there appears to be little consensus on the direction of future gas market development and what may be required over the next few years and in the longer term.

We are mindful that the uncertainty will not be resolved soon. A number of variables will impact the availability and price of gas out to 2020. They include the possibility of more LNG plants, the availability of new supply and the competitiveness of gas as a fuel source in the NEM.

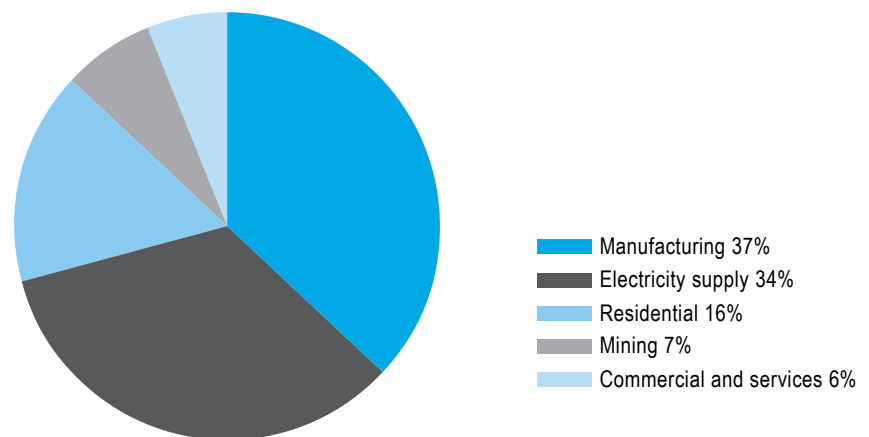
<sup>27</sup> The national gas objective is to promote the efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

In this respect, making gas a strategic priority reflects the importance of flexible long-term strategic planning for the sector to ensure efficient allocation of gas across the economy.

### Why is this important?

Natural gas is a prominent fuel source in the Australian economy. In 2011-12, almost 23 per cent of total energy consumed was from natural gas, the third highest proportion after oil and coal.<sup>28</sup> On the east coast, gas is used predominantly for manufacturing and electricity supply, with residential consumption also notable. The relative breakdown of gas use is shown in **Figure 1**.

Figure 1: East coast gas consumption by industry 2011-12



Markets that promote efficient allocation of gas throughout the economy will have positive effects across multiple industries, residential consumers and the NEM.

Source: BREE, 2013 Australian Energy Update, Table F, Canberra, July; AEMC analysis.

LNG is a growing export commodity for Australia. In 2011-12, around 1,050 PJ<sup>29</sup> of gas, worth over \$11 billion, was exported from Western Australian and the Northern Territory.<sup>30</sup> From 2014 there will be an LNG industry on the east coast with 1,550 PJ of gas exported annually by 2020 from Gladstone.<sup>31</sup> This is in contrast to the east coast domestic market, which consumed 720 PJ in 2012.<sup>32</sup>

Gas is used widely across the economy, from power stations for electricity generation to factories for manufacturing and homes for heating and cooking. Gas, soon to be exported as LNG from the east coast, will be a growing source of export revenue. Therefore, markets that promote efficient allocation of gas throughout the economy will have positive effects across multiple industries, residential consumers and the NEM.

### Developments

The Strategic Priorities discussion paper identified two key developments in the gas market:

1. Structural shift in supply and demand
2. Greater interdependence between the electricity and gas markets.

<sup>28</sup> BREE, 2013 Australian Energy Update, Canberra, July, p. 6.

<sup>29</sup> BREE, 2013 Australian Energy Update, Table J, Canberra, July.

<sup>30</sup> DFAT, Trade at a glance 2012, Canberra, p. 4.

<sup>31</sup> Lowe, K., Gas Market Scoping Study, p. 21.

<sup>32</sup> EnergyQuest, EnergyQuarterly, February 2013.

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Australia's eastern gas market is experiencing a structural and permanent increase in demand and supply due to the development of an LNG export industry.

### ***Structural shift in supply and demand***

Australia's eastern gas market is experiencing a structural and permanent increase in demand and supply due to the development of an LNG export industry. Although exports will not commence until late 2014, the domestic market is already feeling the effects of greater competition for gas. This has resulted in upward pressure on prices and a greater focus on the efficiency of the gas supply chain.

On the supply side, it appears the key uncertainty is whether sufficient gas reserves can be developed in time to meet LNG export schedules and the needs of domestic users. In contrast to conventional gas fields where only a small number of wells are drilled, thousands of coal seam gas (CSG) wells are required by 2014-15 to supply gas to LNG projects. An operation on this scale is unprecedented in Australia and presents a considerable challenge for producers.

From a demand perspective, a new market dynamic facing domestic gas users is the competing LNG export industry. As LNG proponents are also large domestic suppliers, their focus is currently on developing sufficient reserves for export. This looks to be having a twofold effect: first, some reluctance to enter substantive gas contracts before commencing LNG projects; and second, an upward pressure on gas prices. In the short term, producers with available gas may have leverage in negotiations with buyers, as domestic contracts expire or are reopened for price negotiation.

Pipeline utilisation and flow direction are also likely to be affected by changing market dynamics. As production from the Cooper and Surat basins will be diverted to LNG facilities over the next few years, it is expected that additional gas will be supplied from Victoria into the northern states until new supplies are brought online.<sup>33</sup> This will have broader implications for pipeline utilisation and investment in eastern Australia. Gas storage may also begin to play a more influential role in managing seasonal demand and supporting the development and coordination of CSG wells for the LNG plants.<sup>34</sup>

### ***Greater interdependence between electricity and gas markets***

In an environment of growing electricity demand, a carbon price and relatively abundant gas reserves, the forecast increase in gas-fired generation was expected to provide closer interaction between the NEM and gas market. However, as noted by the energy supply association of Australia (esaa), the role of gas-fired generation has become less clear as growth in electricity demand has fallen and price forecasts for gas have risen.<sup>35</sup>

AEMO's forecasts suggest that continued subdued electricity demand in the NEM is likely to defer new base-load generation capacity beyond this decade.<sup>36</sup> Further, AEMO has forecast demand for gas-fired generation across the NEM to decrease out to 2025.<sup>37</sup> Figure 2 shows gas demand for gas-fired generation since June 2011, where the trend in the NEM has been relatively flat, even with the introduction of the carbon price on 1 July 2012.

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33 A recent example is Origin Energy's purchase of 432 PJ of gas from Victorian producers, some of which will be delivered to Sydney.

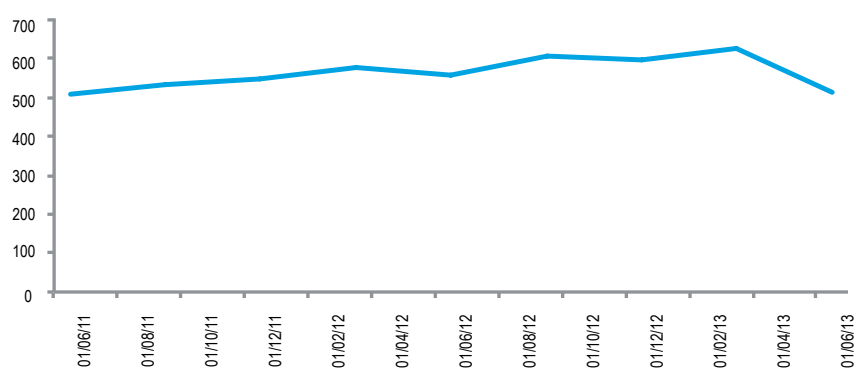
34 For instance, AGL is developing underground storage in the Bowen Basin, Queensland to support the development of the QCLNG project, and LNG storage at Newcastle to ensure security of supply during peak demand periods.

35 ESAA, Electricity Gas Australia 2013, p. 4.

36 AEMO, Electricity Statement of Opportunities, 'Executive Summary', 2012.

37 AEMO, Gas statement of opportunities, 'Figure 4', 2012.

Figure 2: Average daily demand for gas for gas-fired generation (TJ)<sup>38</sup>



Average daily demand for gas for gas-fired generation (TJ)

There was a general view that the east coast gas market is increasing in importance and that it is appropriate for the AEMC, in line with its institutional role, to be in a position to provide policy-makers with market development advice.

### Stakeholder views

A number of stakeholder submissions commented on the inclusion of gas as a strategic priority. There was a general view that the east coast gas market is increasing in importance and that it is appropriate for the AEMC, in line with its institutional role, to be in a position to provide policy-makers with market development advice.

Submissions covered a cross-section of views. Origin Energy noted that there are not 'material problems with the function of the east coast gas market' and that future development should focus on incremental improvement.<sup>39</sup> Origin also noted the importance of price signals in bringing on additional sources of gas supply, and of long-term contracts in attaining the necessary finance for new projects.<sup>40</sup>

At the other end of the spectrum, Hydro Tasmania believed we should facilitate the development of a 'blank sheet approach to market design' which would become a long term objective or 'light on the hill' to guide decisions made in the short term.<sup>41</sup> The National Generators Forum (NGF) considered there was merit in undertaking an exercise similar to that proposed by Hydro Tasmania, while noting the importance of developing financial derivatives, further investment in pipelines and access to gas storage.

Alinta Energy noted that the AEMC's intention to undertake a gas market scoping study would be a prudent and useful piece of work. Conversely, AGL considered that the 'looming problem...is one of market tightening and rising prices' and that 'this is a structural issue of adequacy of supply for the domestic market'.<sup>42</sup> AGL questioned whether there was much to be identified in the way of policy recommendations.

APA Group was of the view that the AEMC 'appears to have assumed that further market regulation of the . . . transportation sector is required, without a comprehensive assessment of the current market and its limitations'.<sup>43</sup> APA Group also noted that the potential of the east coast gas market has not been realised due to 'a lack of competition in the upstream sector'.<sup>44</sup>

<sup>38</sup> AER, *Performance of the energy sector*, 2012.

<sup>39</sup> Origin Energy, *discussion paper submission*, p. 2.

<sup>40</sup> *Ibid.*, p.3.

<sup>41</sup> Hydro Tasmania, *discussion paper submission*, p. 2.

<sup>42</sup> AGL, *discussion paper submission*, p. 2.

<sup>43</sup> The AEMC notes that it does not have a position, and the discussion paper did not articulate a position, on whether additional obligations should be placed on transmission pipelines around capacity trading. As APA Group observes, any such regulatory intervention should be subject to a comprehensive review.

<sup>44</sup> APA Group, *discussion paper submission*, p. 4.

The Energy Retailers Association of Australia, the Energy Networks Association and the Energy Efficiency Council supported the need for ongoing gas market development work and the inclusion of gas as one of the AEMC's strategic priorities.

With respect to the integration of the electricity and gas markets, Alinta Energy suggested that a reduction in gas-fired generation as a proportion of total generation may not imply reduced integration. It could be a sign that participants are balancing between markets to a greater extent and thus it reflects greater integration.<sup>45</sup>

### **Key issues for this strategic priority**

#### ***A market in transition***

As discussed above, the east coast gas market is undergoing a transition as production increases to historically high levels, to meet new demand driven by a Gladstone-based LNG export industry. In response, east coast wholesale gas prices, which have been historically low by international standards, are likely to rise as new gas contracts are negotiated and existing contracts expire.

In this respect, gas prices play an important role in signalling that producers should continue to invest in bringing additional supplies of gas to market. For Australia, this may mean bringing forward investment in technologies to enable the economic development of unconventional gas resources, such as shale gas. It may also mean investment in upgrading infrastructure to expand the productive capability of existing gas fields.

This kind of response to rising gas prices has been seen in the United States. It has the potential to substantially increase the supply of gas to the economy. Arguably, without rising gas prices in the US pre-2008, producers would not have invested in technologies that led to an immense increase in gas supply. The Australian east coast gas market has sizeable unconventional gas resources, some of which are located close to existing infrastructure in the Cooper Basin and which have the potential to be brought to market relatively quickly.

While there may currently be upward pressure on gas prices, Australian domestic gas prices remain competitive from a global perspective. As shown in Figure 3, Japan has the most expensive domestic gas price – due to its heavy reliance on LNG imports – while countries such as Turkmenistan, Algeria and Saudi Arabia have the cheapest. Australia sits below the middle with average prices around a quarter of Japan's and Singapore's in 2012.

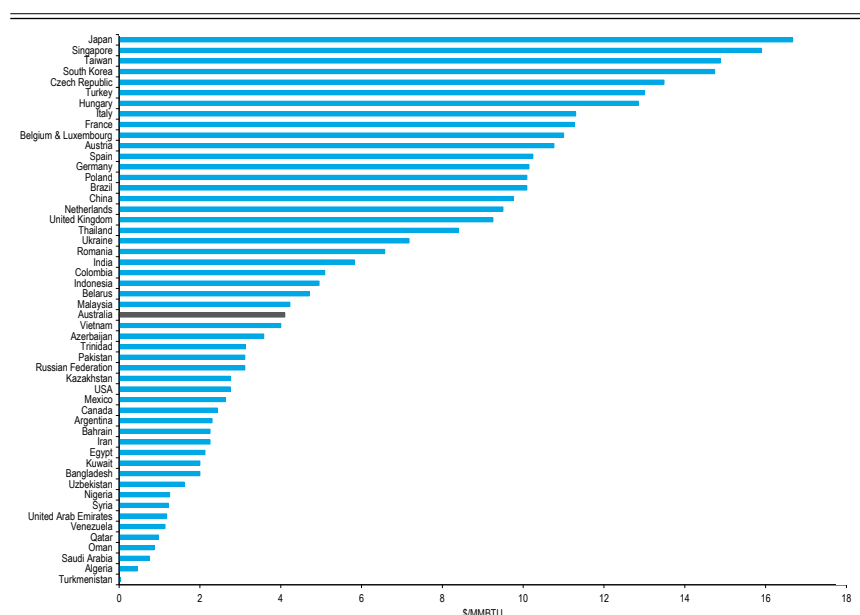
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East coast wholesale gas prices, which have been historically low by international standards, are likely to rise as new gas contracts are negotiated and existing contracts expire.

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<sup>45</sup> Alinta Energy, discussion paper submission, p. 4.

Figure 3: Wholesale gas prices in 2012, by country<sup>46</sup>



The increasing link between domestic gas prices and movements in the international oil price is a new phenomenon for domestic gas users and will require a new approach to risk management.

Over the past 12 months a number of domestic gas contracts have been announced to the ASX. These are detailed in table 3 below. Of note is the increasing link between domestic gas prices and movements in the international oil price, reflecting the price structure used in Asian LNG contracts. This is a new phenomenon for domestic gas users and will require a new approach to risk management.

Table 3: New east coast gas supply agreements announced in 2013<sup>47</sup>

Seller	Buyer	Size	Start	End	Oil linkage
Beach Energy	Origin Energy	up to 173 PJ	mid-2014	2022-24	Yes
BHPB-Esso	Lumo Energy	22 PJ	2015	2018	Yes
Origin Energy	MMG	22 PJ	2013	2020	No
BHP-Esso	Origin Energy	432 PJ	2014	2023	Yes
Total		649 PJ			

With natural gas predominantly bought and sold through long term contracts, it is unlikely that all domestic users will need to enter the market to source gas during this period of transition. As domestic users approach the market at different times to fulfil their needs, demand is 'lumpy' and the price determined between buyers and sellers is influenced by market conditions at the time of negotiation. While contractual review mechanisms may lessen this effect, domestic users of gas will be impacted to varying degrees, and at different times, by changing market conditions.

The nature of demand, which determines the need for long-term contracts, varies depending on who the end users are. Gas in eastern Australia is

46 International Gas Union, *Wholesale Gas Price Survey – 2013 Edition*, p. 20.

47 Note the Origin Energy/MMG agreement was announced on 21 December 2012.

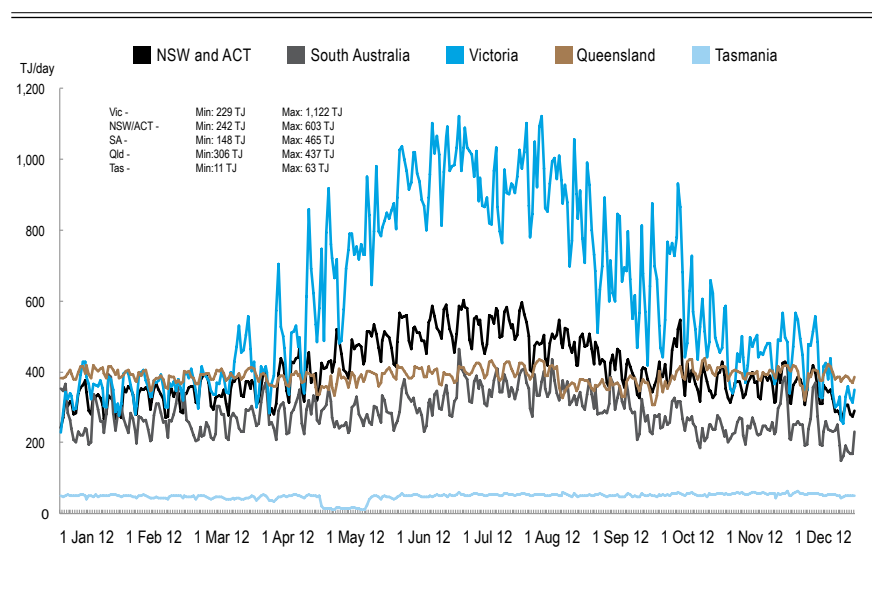


used by retailers, manufacturing and mining customers, and gas-fired generators. To secure project investment, each of these participants is generally required to demonstrate to its financiers that it has the necessary supply of gas to cover the financing period, either through a gas contract or ownership of gas reserves. These commercial realities are unlikely to be removed in the near future, even with the development of an LNG industry and implementation of new trading markets.

Variability in gas demand is also unlikely to change significantly. Figure 4 shows the daily demand for gas on the east coast in 2012.<sup>48</sup> A distinction can be seen between Victoria, with winter peaking due to heating requirements, and Queensland, which has a relatively flat profile due to a larger proportion of industrial users with a constant demand for gas. When the LNG plants at Gladstone become operational, they are expected to be run at a constant rate and will therefore exhibit a flat demand profile. So, while gas demand in Queensland will shift upwards, the demand profile is unlikely to change materially.

Figure 4: Variability of gas demand across jurisdictions 2012

A positive feature of these arrangements is that the risk associated with investment in gas infrastructure is borne by the investor, who is best placed to manage it, and not by consumers.



#### What does this mean for market participants and consumers?

Gas markets provide the mechanism through which natural gas is traded within the economy. Over time, as a market grows and evolves, the way in which trading occurs is also expected to evolve in response to the needs of participants. As noted in the discussion paper, a market that promotes an efficient allocation of natural gas and pipeline capacity, whether characterised by bilateral contracts, spot trading or a combination of the two, should operate flexibly and transparently while minimising transaction costs.

Gas and pipeline capacity is predominantly sold under medium- to long-term contracts, which are entered into on a bilateral basis between producers and retailers and other large users. Long-term contracts are a feature of the market due to the capital intensive and specific nature of the assets, as well as the needs of large end users (such as power stations and manufacturers) who require certainty of supply to finance their own activities. A positive feature of these arrangements is that the risk associated with investment in gas infrastructure is borne by the investor, who is best placed to manage it, and not by consumers.

<sup>48</sup> K Lowe Consulting, *Gas market scoping study*, 2013, p. 18.

On the other hand the widespread use of contracts which are usually confidential limits the transparency around gas price outcomes, and volumes of gas being traded, to those outside the industry. Even when the gas price within a contract is made public, it is usually difficult to compare with other publicly known gas prices. This is because terms and conditions within contracts, which can impact price, can vary markedly. Limited price transparency for gas supply agreements may be adding to concerns among some consumers and governments during this period of market adjustment.

Over the next few years as new sources of supply are required to replace existing domestic contracts and potentially to supplement gas supply for the LNG plants, medium- to long-term contracts are expected to continue to be a feature of the industry. Bringing new supply online, or expanding existing infrastructure, will require large capital outlays to fund production and pipeline infrastructure, and will therefore need to be underwritten by foundation contracts to provide investor confidence. This is evident in the number and size of gas contracts in Table 3 above that have been announced this year, some with terms out to 2024.

An emerging issue is managing the risk associated with having gas prices in domestic contracts linked to an international oil price often in United States dollars. In the past, domestic gas prices were generally increased annually with inflation and subject to broader price reviews every three to five years. With growing links to oil, both producers and end users may need more sophisticated risk management options to manage oil price and exchange rate fluctuations. This could potentially include the use of oil derivatives, such as futures and options, which are available on mature and liquid global oil markets.

As the eastern gas market has matured and the number of participants grown, producers and pipeline owners have recovered a significant proportion of their initial investment, and have been willing to enter into shorter-term contracts. A limited volume of daily spot trading also takes place on the Victorian Declared Wholesale Gas Market and the Short Term Trading Market in Adelaide, Sydney and Brisbane. However, these are primarily used for managing daily gas imbalances. A third facilitated market, the Wallumbilla gas supply hub, will be operational in early 2014. It has been designed by AEMO to facilitate greater wholesale trading of gas and the development of forward products.<sup>49</sup>

An increase in the use of markets to undertake short-term trades of gas and pipeline capacity is an attribute of mature and well developed gas markets around the world. However, given the relatively small number and type of participants in the eastern Australian gas industry, it is not yet clear how many trading markets can be efficiently supported, yet provide the liquidity and depth that supports credible price signals.

Further, it is also uncertain whether the sector has yet grown and matured to the point where relying on spot markets as a means of procuring gas and pipeline capacity would reduce transaction costs for users and producers, and would therefore be commercially attractive.

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Limited price transparency for gas supply agreements may be adding to concerns among some consumers and governments during this period of market adjustment.

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<sup>49</sup> See: <http://www.aemo.com.au/Gas/Market-Operations/Gas-Supply-Hub>

### *Electricity and gas markets – is greater integration a priority?*

Given the lack of discussion on this issue in submissions and the workshops, it is apparent that market participants do not see greater integration between the electricity and gas markets as a priority. As noted above, this is most likely due to current oversupply of generation in the NEM, which is deferring expectations around when new generation is required, as well as the new Australian Government's intention to repeal the carbon price, which would decrease the competitiveness of gas relative to coal.

A similar situation is occurring in Europe where gas demand is at its lowest level since the 1990s, due to low coal prices, low carbon prices and growth in renewable generation, as well as weak economic activity. In the past two years gas demand from the electricity sector has fallen by 38 per cent in France and 23 per cent in Spain.<sup>50</sup> The prospect of subdued electricity demand due to growth in renewable generation capacity driven both by the large-scale renewable energy target (LRET) and repeal of the carbon price, means that gas-fired generation in the NEM may be facing a period of decline over the next few years.

Given the lack of focus on electricity and gas market integration in submissions and at the workshops, it is clear that stakeholders do not currently see this as a material issue.

### **Work to address the priority**

#### *Gas market scoping study*

As raised in the discussion paper, the AEMC committed to undertaking a gas scoping study in the latter half of 2013 to better understand issues raised in the paper, the stakeholder workshop and in submissions.

The objectives of the gas market scoping study were to:

- provide an overview of the changes under way in the eastern gas market
- identify areas of potential improvement in market and regulatory arrangements that may benefit from future market development work, prioritise their importance, and identify who may be best placed to take the work forward.

In addition to informing our ongoing gas market development role, the gas market scoping study provides us with a broader context when considering gas rule changes.

The gas market scoping study complements work being undertaken on the sector by the Commonwealth, Victorian and New South Wales Governments. Given that our functions and expertise with respect to gas primarily relate to trading markets and the pipeline regulatory framework, the scoping study report focuses on these areas.

K Lowe Consulting, with Farrier Swier Consulting, were engaged to prepare the scoping study report. Over 22 one-on-one interviews were conducted with market participants, a public workshop was held in Sydney and eight submissions received as part of the consultation process. The report was published on the AEMC website on 27 September 2013.<sup>51</sup>

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The prospect of subdued electricity demand due to growth in renewable generation capacity driven both by the large-scale renewable energy target and repeal of the carbon price, means that gas-fired generation in the NEM may be facing a period of decline over the next few years.

<sup>50</sup> EnergyQuest 2013, EnergyQuarterly, February, p. 11.

<sup>51</sup> <http://www.aemc.gov.au/Market-Reviews/Open/gas-market-scoping-study.html>

A key finding of the gas market scoping study was the need for a strategic plan for market development within which the industry, market institutions and governments can work towards achieving a more mature and well-functioning market. It is apparent that, while participants are aware of the developments taking place in the gas market, there is no general consensus around the direction that gas market development should take over the next 10 to 15 years.

This gap could be filled through a review that examines the evolving role, in changing market conditions, of the Short Term Trading Market, Victorian Declared Wholesale Gas Market and the Wallumbilla gas supply hub. The review would examine the mix and location of trading markets, the size of the markets, types of participants, and costs and benefits. If the review identified the need to develop financial risk management products, the need to attract sufficient liquidity to support such development would also have to be considered.

Clarity about the role and objectives of each facilitated market will ensure that future development work is appropriately targeted. It will also mean that markets are developed with a greater chance of meeting the commercial and practical needs of participants.

A key feature of such a review would be to work with industry, consumer groups and governments to define the issues before looking at the costs and benefits of potential solutions.

We will continue to work with governments, market participants and consumer groups on a long-term pathway to support development of the east coast gas market.

# 4. Market priority: market arrangements that encourage efficient investment and flexibility

## How does this priority benefit consumers?

A more efficient and flexible investment environment can reduce the risk of investing in the market, and therefore the return sought by investors. These lower returns feed through to consumers as lower prices.

Stability in markets and regulation, balanced with flexibility to adapt to changing circumstances, attracts more investors to the market. The entry of more market players facilitates an effectively functioning competitive market, helps to reduce price pressures, and increases choice and product variety for consumers.

Well-designed markets help to ensure that the risks associated with market investment are carried by businesses that make investment decisions. Risks should only lie with consumers where they are better able than industry players to make decisions and take action to mitigate those risks.

## Introduction

The AEMC is broadly retaining this strategic priority from the list we developed in 2011, reflecting the importance of market and regulatory arrangements which promote efficient investment decisions. Because future investment requirements are relatively uncertain, market arrangements must be flexible enough to facilitate investments that can be adapted in line with changing policies, market conditions and external factors.

However, the nature of the investment challenge has evolved since the 2011 Strategic Priorities paper. While there is still a need for very large volumes of new renewable generation to meet the 2020 renewable energy target (RET), the current oversupply of generation capacity in the NEM means the emphasis now is less on attracting and facilitating sufficient investment in generation capacity, and more on attracting the most efficient investments that minimise costs for consumers.

## Why is this important?

The market and regulatory environment should aim to attract investment and finance to the Australian energy sector at competitive rates by providing:

- relatively stable arrangements that are well understood by investors
- flexibility to adapt, with transparent and well understood processes for change.

Stability benefits consumers. A more certain investment environment can reduce the risk associated with new investment and therefore the return sought by investors. These lower returns then feed through to consumers as lower prices. Participants are also more likely to enter into long-term contracts to underpin their investments, as the value of those contracts becomes more readily agreed when confidence in the market increases. These factors make investing in the sector more attractive and help to ensure a stream of investment to maintain a reliable and secure energy supply.

When the investment environment is uncertain it is more difficult to choose between various investment options. The rational response of investors is to delay decisions. Conversely, certainty in markets and regulations attracts more investors. The entry of more players facilitates

an effectively functioning competitive market, helps to reduce price pressures, and increases choice and product variety for customers.

On the other hand, markets have to adapt. Change will always be a feature of energy markets. Technology, consumer expectations and the policy environment, for example, will evolve over time. Good market and regulatory arrangements change as knowledge develops. Arrangements need to be flexible enough to facilitate investment options that best meet current and future requirements, but without creating barriers or distortions that affect decision-making. This is the case for both the monopoly-regulated network sectors and the competitive generation and retail sectors of the industry. The way in which change occurs is therefore important. It should be transparent, based on clear objectives and relatively predictable.

### **Developments since the discussion paper**

The discussion paper set out our views on the challenges that this priority seeks to address. The focus of the challenge facing the market can be summarised by the following extract from that paper:

The form that future investment will take is arguably more uncertain than it has been for some time. As technology develops there are more options for the future, although which technologies will be the most cost effective and favoured by consumers is uncertain. This uncertainty can also be magnified when coupled with policy uncertainty. A degree of uncertainty is inherent to all markets and can generally be addressed through risk management options. However, as the level of uncertainty increases, so too does the investment risk for longer term assets and the level of return required.

### ***Stakeholder views on the challenges***

Submissions to the discussion paper and contributions to the stakeholder workshops largely agreed with the challenges outlined in the paper.

The key points raised in relation to this priority were:

- Several stakeholders expressed concerns about external policies driving an oversupply of generation capacity. Uncertainty about carbon policy and the RET was a continuing concern. This affects investment decision-making.<sup>52</sup>
- Given the importance of demand forecasts to investment decision making, there were some calls for improved transparency and debate around demand forecasts, to help promote an informed long-term view on future demand trends.<sup>53</sup>
- There was discussion of the difficulties of measuring the value of customer reliability and building it into network planning, particularly transmission planning.<sup>54</sup>
- There was also a call for a review of the increased regulatory burden on market participants resulting from regulators and other bodies conducting reviews of the energy market and influencing energy policy.<sup>55</sup>
- Submissions also called for increased transparency, including provision of more research and information to consumers, on the impact of rule changes and regulatory determinations, as well as increased reporting of performance measures of the NEM.<sup>56</sup>

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Good market and regulatory arrangements change as knowledge develops.

52 Alinta Energy, *discussion paper submission*, p.2-3; Origin Energy, *discussion paper submission*, p.4.

53 Brisbane workshop discussions.

54 Brisbane workshop discussions.

55 Alinta Energy, *discussion paper submission*, p.2; AGL, *discussion paper submission*, p.2. Sydney and Brisbane workshop discussions.

56 Total Environment Centre, *discussion paper submission* p.3; Sydney workshop discussions.

Since publication of the discussion paper in April, further developments in the market and policy environments could impact investment decisions:

### ***2013 Electricity Statement of Opportunities***

AEMO published the 2013 Electricity Statement of Opportunities (ESOO) on 13 August.<sup>57</sup> The ESOO supports decision-making in the NEM by analysing opportunities for electricity generation and demand-side investment over a ten-year outlook period under a range of economic scenarios. The 2013 ESOO finds that all states except Queensland have adequate generation capacity over the ten-year period of the report. In the other NEM states, investment requirements have been deferred by at least one year compared to the 2012 ESOO. The main reason for this is that demand is projected to grow at a lower rate than forecast in 2012.

In 2012-13, 522.7 MW of new large-scale generation was added to the NEM's generation capacity. Most of this new capacity, 439.5 MW, is wind generation from Macarthur Wind Farm (420 MW) and Morton's Lane Wind Farm (19.5 MW), both in Victoria. It is estimated that 774 MW of rooftop PV generation capacity was installed in the NEM in 2012-13.

### ***External policy settings***

Since publication of the discussion paper in April, government policy on mechanisms to reduce carbon dioxide emissions from the electricity sector has changed twice. The previous Labour Government announced it would bring forward by one year the transition of a price on carbon emissions, from a fixed price to a floating price linked to the European Union Emissions Trading Scheme. The Liberal-National Coalition gained office following the 7 September election. Its stated policy is to abolish the carbon price and fund emissions cuts through 'direct action' policies.<sup>58</sup> Any changes to the carbon price legislation would need to pass through Parliament.

The future of the RET has also continued to be the source of speculation in recent months. The new Government's current policy is to conduct a full review of the RET in 2014. This is consistent with currently legislated timing for a review.

### ***Retail markets***

Since publication of the discussion paper in April, the Queensland Government has announced its intention to remove retail price regulation for electricity consumers in South East Queensland from 1 July 2015.<sup>59</sup>

The AEMC recently completed a review on the effectiveness of competition for small electricity and natural gas customers in NSW. The review found that competition benefits consumers in NSW, who have a choice of retailer and of product or service. We are therefore recommending a package of measures to further enhance competition, including removing retail price regulation, improving information for consumers, maintaining consumer protections and ongoing market monitoring. This review is discussed, from a consumer point of view, in the consumer priority chapter.

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<sup>57</sup> AEMO, *Electricity Statement of Opportunities for the National Electricity Market*, 13 August 2013.

<sup>58</sup> The Coalition's Direct Action Plan can be found at this link: [http://parlinfo.aph.gov.au/parlInfo/download/library/partypol/LIOX6/upload\\_binary/LIOX6.pdf;fileType=application%2Fpdf#search=%22library/partypol/LIOX6%22](http://parlinfo.aph.gov.au/parlInfo/download/library/partypol/LIOX6/upload_binary/LIOX6.pdf;fileType=application%2Fpdf#search=%22library/partypol/LIOX6%22)

<sup>59</sup> Retail prices for gas are not currently regulated in Queensland.

### *Limited Merits Review*

In June 2013 SCER published a decision regulatory impact statement (RIS)<sup>60</sup> in response to a review, by an expert panel, of the limited merits review regime.

SCER's policy position, set out in the RIS, is to retain the Australian Competition Tribunal as the review body and to maintain the limited nature of merits reviews. However, SCER will introduce much clearer links to the long-term interests of consumers through a series of changes to national energy laws and rules. These will modify the test for initiation, processes, and roles of participants in a review process.

The consultation aims to test the panel's recommendations with a view to finalising the policy position and, if necessary, amending the relevant legislation before the end of 2013.

### **Key issues for this strategic priority**

The following section discusses key issues, raised in submissions and workshops, for this priority. It articulates the AEMC's views in relation to these issues, providing a framework for how the priority will guide our approach to energy market development.

### **Market design, market governance and market objective**

Some stakeholders questioned whether the current market design would remain appropriate, given increasing levels of renewable generation in the market. Some submissions called for a review of current trading arrangements and market settings, in the context of a growing divergence between energy and capacity in the generation market.<sup>61</sup>

Discussion also centred on accounting for externalities in the energy market. There was a view that we should take greater account of externalities in assessing the long-term interests of consumers. Some stakeholders proposed that the AEMC's role should incorporate social and environmental objectives.<sup>62</sup> However, a number of parties disagreed, arguing that the National Electricity Objective (NEO) should remain focused on efficiency and that other objectives should be addressed elsewhere.<sup>63</sup>

### **Market design**

The wholesale electricity market has worked effectively since the NEM started fifteen years ago, and has delivered good outcomes for customers. We have seen a high level of supply reliability as a result of timely investments in new capacity and reliably operated plant, together with average wholesale prices close to the long-run costs of generation.

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Some submissions called for a review of current trading arrangements and market settings, in the context of a growing divergence between energy and capacity in the generation market.

60 Alongside the RIS it also published consultation draft legislation for the National Electricity and Gas Laws and Competition and Consumer Regulations.

61 AGL, *discussion paper submission*, p.2; GDF Suez, *discussion paper submission*, p.2, Alinta Energy, *discussion paper submission*, p.3; Energy Australia, *discussion paper submission*, p.2.

62 Total Environment Centre, *discussion paper submission*, p.3-4, SACOSS, *discussion paper submission*, p.3; EWON, *discussion paper submission*, p.1; Sydney workshop discussions.

63 GDF Suez, *discussion paper submission*, p.4; Sligar & Associates, *discussion paper submission*, p.1; Sydney workshop discussions.



## BOX 1 – Indicators of NEM performance

### Investment

From the inception of the NEM in 1998 to June 2012, new investment has added 13,200 MW of registered generation capacity – around 1000 MW per year. Investment has responded efficiently to fluctuations in the supply-demand balance. For example, tightening supply conditions has led to an upswing in generation investment in 2008-09 and 2009-10, with over 4,100 MW of new capacity added in those years. More recently, subdued demand and surplus capacity has seen flatter investment, with only 1,350 MW of capacity added in 2010-11 and 2011-12, one third of which was wind generation.<sup>64</sup>

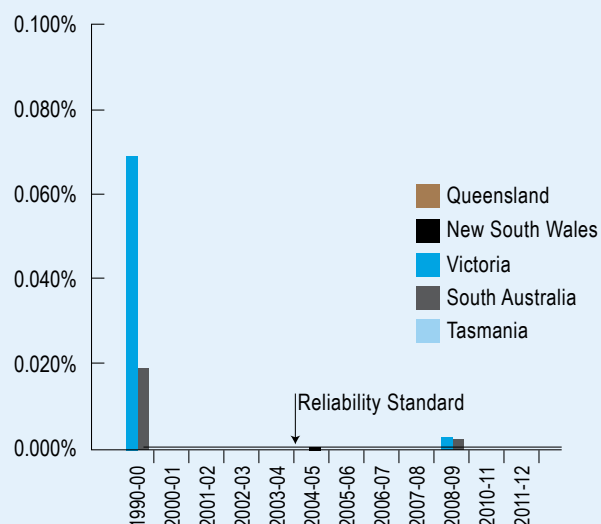
### Reliability

Timely investment in response to prevailing and expected market conditions has meant consumers in the NEM enjoy high levels of reliability from the wholesale market.

As mentioned in the consumer priority chapter, reliability is generally associated with ensuring there is enough capacity to generate and transport electricity to meet all consumer demand. Reliability is measured in terms of unserved energy (USE) which refers to an amount of energy that is sought by customers but cannot be supplied. The Reliability Standard of 0.002 per cent expected USE is designed to measure whether there is sufficient available capacity to meet demand.

Figure 5 shows that the NEM has delivered a very high level of reliability. Two states, Queensland and Tasmania, have never experienced USE as a result of insufficient generation capacity. New South Wales has experienced a single incident of USE – accounting for 0.00005% of demand in 2004-5. Victoria and South Australia have both exceeded the reliability standard in two years, with the highest level of USE being 0.068% in Victoria in 1999-2000.<sup>65</sup>

Figure 5 – Regional USE since NEM start<sup>66</sup>



<sup>64</sup> AER, *State of the Energy Market 2012*.

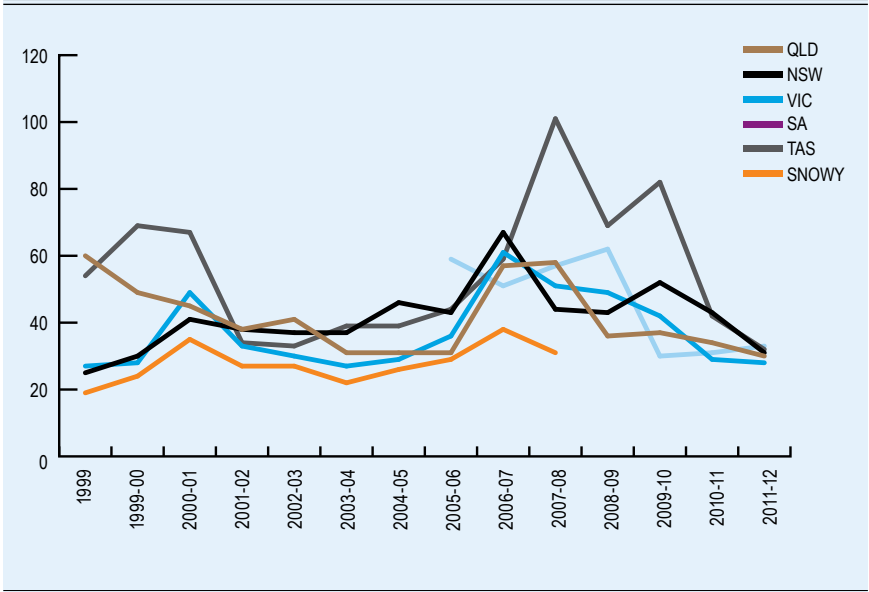
<sup>65</sup> Note that USE from generation reliability incidents only accounts for around 1% of all USE experienced by customers. The rest is a result of security incidents (where power system equipment is not maintained within its operating limits) and faults on the transmission or distribution network.

<sup>66</sup> Sources: Australian Energy Market Commission Reliability Panel, *Annual Market Performance Review*, Final Report, AEMC, 27 March 2013; AEMC Reliability Panel, *Annual Market Performance Review*, Final Report, AEMC, 23 December 2010; AEMC Reliability Panel, *Comprehensive Reliability Review*, Issues Paper, AEMC, May 2006.

### Prices

This investment and reliability have been achieved while maintaining prices at levels close to long-run costs. For example, analysis carried out by the AEMC for the assessment of a rule change request on potential generator market power in the NEM found that ‘the comparison of LRMC (long run marginal cost) with wholesale spot and contract market outcomes for New South Wales, Queensland and Victoria shows results which are consistent with a wholesale electricity market that responds to the supply demand position broadly as would be expected of a workably competitive market.’<sup>67,68</sup>

Figure 6 – Volume weighted average spot electricity prices (\$/MWh)<sup>69</sup>



A convincing argument for changing market design would need to demonstrate firstly that the problem lies with current market design, and secondly that a different design would work better.

This investment and reliability have been achieved while maintaining prices at levels close to long-run costs. For example, analysis carried out by the AEMC for the assessment of a rule change request on potential generator market power in the NEM found that ‘the comparison of LRMC (long run marginal cost) with wholesale spot and contract market outcomes for New South Wales, Queensland and Victoria shows results which are consistent with a wholesale electricity market that responds to the supply demand position broadly as would be expected of a workably competitive market.’

However, we are currently faced with a paradox, where wholesale prices and energy demand are declining while retail prices are increasing.

Any examination of the effectiveness of the current market design should start by asking what has caused these changes. A convincing argument for changing market design would need to demonstrate firstly that the problem lies with current market design, and secondly that a different design would work better. The AEMC does not believe there is strong evidence for either proposition.

67 Australian Energy Market Commission, Potential Generator Market Power in the NEM, Final determination, AEMC, April 2013.

68 The Commission considered comparison of annual average wholesale prices and estimates of LRMC for South Australia to be less clear than for the other NEM regions. There is a three year period, from 2007-08 to 2009-10, where for two years the annual average wholesale spot prices could be observed to be near the top of the LRMC range and one year where prices exceeded the market modelled LRMC, with a significant deviation observed in 2007-08. However, annual average wholesale spot prices for the most recent two year period from 2010-11 to 2011-12 are significantly below market modelling estimates of LRMC.

69 Source: AER, State of the Energy Market 2012.

As noted above, several stakeholders expressed concerns regarding external policies, in particular the RET, driving an oversupply of generation capacity and contributing to the wedge between wholesale and retail prices. The RET is designed to increase the supply of renewable generation. An inevitable consequence of increasing supply is downward pressure on wholesale prices. The wholesale market has therefore responded as an efficient market should to an externally imposed oversupply.

Retailers are facing higher costs due to the significant investment in recent years in network infrastructure, to falling demand leading to higher average prices as fixed costs are recovered from fewer units of consumption, and to the costs of government policies, such as state feed-in tariffs and the RET. These additional costs are reflected in higher retail prices for consumers. This does not point to a failing of the wholesale market.

We have not yet seen any convincing arguments that a change in market design would produce better outcomes.

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Any discussion of how to improve the NEM or how the NEM is affected by policy or regulatory changes needs to explicitly address the question of risk allocation.

Any discussion of how to improve the NEM or how the NEM is affected by policy or regulatory changes needs to explicitly address the question of risk allocation. A difference in the way the NEM allocates risk is perhaps the defining feature distinguishing it from the vertically integrated utility industry structure of old, and from 'capacity mechanisms' such as the one found in Western Australia. In the latter, a 'central authority' plans the level of generation capacity required based on its expectations of future supply and demand and retailers are required to secure that capacity bilaterally or purchase it from the 'central authority'. By necessity the costs are passed onto consumers, as are the risks. If forecasts turn out to be inaccurate (and evidence from other jurisdictions suggests this tends to be the case), and there is over-investment, prices rise and consumers pay for what turns out to be inefficient investment.

In terms of risk allocation and investment decision making, there is little to differentiate capacity 'markets' or 'mechanisms' from the pre-NEM state-based monopoly utility structures.

As described in Box 2 overleaf, a review of the capacity mechanism in Western Australia has been proposed in view of the emergence of issues connected with inaccurate forecasting and over-investment at consumers' expense.

In the NEM design, generation businesses, in competition with one another, make these investment decisions. They may be no better at forecasting the future than were the utilities. However the important difference is that over-investment results in lower prices, and that equity shareholders bear the cost of inefficiency – a very different way of allocating risk and one which provides very different incentives for efficiency.

Policy and regulatory decisions need to be guided not so much by taking projections or forecasts as a given, but by clarity around how risks are to be allocated.

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The current NEM governance arrangements benefit from two key attributes: a clear and appropriate allocation of roles and clear objectives associated with each role.

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**Box 2 – Extract from 2012 report by the Economic Regulation Authority of Western Australia (ERAWA) to the Western Australian Energy Minister**

“Although the operation of the Reserve Capacity Mechanism (RCM) has resulted in the capacity requirement always being met, it has also resulted in the accumulation of a substantial amount of excess capacity over the capacity requirement, i.e. the market has purchased a level of capacity that is in excess of the required amount of capacity.

“There has been excess capacity in the market since its inception and that this has recently increased. Additionally, the forecast peak demand has continually grown ahead of the actual demand.

“...the direct cost of excess capacity to consumers in the 2011/12 year is estimated at approximately \$26 million. Moreover, the investment in excess capacity could have been better spent elsewhere in the economy; hence there are indirect costs to the economy as well as direct costs to consumers. Whilst the extent of this total cost to the economy has not been quantified, it is clear that it is not an economically efficient outcome.

“Given the significance of the issue, the Authority recommends that the Public Utilities Office (PUO) undertake a comprehensive, holistic review of the current market design of the RCM in its entirety, with a view to considering the long term evolution of the market and the realisation of efficient economic outcomes.”<sup>70</sup>

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***Market governance and the importance of policy integration***

The National Electricity Objective (NEO) focuses on efficient investment in and efficient operation of electricity services. There was some discussion at the Sydney workshop about whether the objective should be expanded to have a social and/or environmental focus, in addition to efficiency.<sup>71</sup>

The current NEM governance arrangements benefit from two key attributes: a clear and appropriate allocation of roles and clear objectives associated with each role. This brings clarity and transparency to the decision-making of the respective institutions, and therefore to stakeholders’ expectations of how the AEMC will approach issues.

The sector’s institutional structure, and in particular the separation of roles between the AEMC and the AER, is unusual compared to other countries. Separating the roles of governments, the market developer, the operator and the regulator has resulted in independent decision-makers with clear accountabilities and objectives. It is appropriate for governments to be responsible for high-level policy and broader social value judgements. This enables market bodies to focus their effort on their respective roles in the efficient operation of the market in the long-term interest of consumers.

We understand that investors generally appreciate the value of these separate roles in promoting a transparent and predictable regulatory regime. This was borne out by submissions to the discussion paper, which supported the continued separation of the three market bodies (AEMC, AER and AEMO).<sup>72</sup>

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70 Economic Regulation Authority, *2012 Wholesale Electricity Market Report for the Minister for Energy*, 19 April 2013, pp 5-6.

71 This was also raised by Total Environment Centre in its submission to the discussion paper.

72 APA Group, *discussion paper submission*, p.4; Alinta Energy, *discussion paper submission*, p.2.

Our responsibility – to focus on economic efficiency in regulating the energy sector – helps to avoid duplication and distortion of other policies designed to serve the broader public interest. For example, social and environmental outcomes are affected by a number of industries and sectors. Such issues are therefore best addressed through other legislation and government policies that act as an umbrella for all of those sectors, including the energy sector.

Addressing social and environmental issues also typically requires value judgements using broader information about the economy as a whole and about the welfare of the population. It could be argued that this is more appropriately and efficiently addressed by elected governments than by market regulators.

This is not to say that decisions on environmental policy (for example) should be taken entirely in isolation from energy market policy. It is important that all policy decisions take account of the impacts on sectors they are likely to affect.

For instance, there is more than one approach to reducing carbon emissions. However, each approach may impact the energy sector differently. A policy that achieves the government’s environmental objectives, while minimising inefficiencies in the energy markets, will result in the best outcomes for consumers. Similarly, policies which provide support to specific groups of consumers should be designed in such a way that they maintain appropriate price signals for all energy consumers.

A recent report by the Business Council of Australia, ‘Action Plan for Enduring Prosperity,’ supported an integrated approach to energy and environmental policy:

*Australia needs an integrated approach to energy and climate change mitigation policy that is coherent with our economic goals.*

*We need to recognise the role energy plays in the Australian economy and its importance in delivering substantial wealth and prosperity to all Australians.*

*An overarching policy objective should recognise that our economic prosperity and energy security are paramount and that we must seek to reduce our greenhouse gas emissions in a way that does not compromise these fundamentals.*

*Accordingly, we need an overarching policy framework that drives the growth of our energy exports and provides for the reliable and competitively priced supply of energy, while meeting our environmental objectives in a way that does not place Australia at a competitive disadvantage to the rest of the world.*

*Only when we are clear on the objective can we recognise, and support, the role energy plays in our economy and set a lasting course to efficiently reduce our greenhouse gas emissions.*

Integrated policy outcomes are most likely to occur when decisions are taken in a transparent manner and after full consultation with all affected parties. When providing advice to governments, we have established consultation processes to give industry participants and consumer groups an opportunity to contribute their views. We consider stakeholder engagement to be a critical aspect of our rule making and market development work.

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Integrated policy outcomes are most likely to occur when decisions are taken in a transparent manner and after full consultation with all affected parties.

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We need to strike a balance between ensuring sufficient consultation on, and transparency of, our decisions, and minimising the regulatory burden on stakeholders.

### Box 3 – An example of successful policy integration

An example of successful policy integration – where policy objectives in another area are being considered in the context of the energy sector – is the G20 over-the-counter (OTC) derivative trading requirements. This legislation was prompted by the global financial crisis.

- OTC electricity derivatives are widely used by participants in the electricity market and play an important role in their risk management strategies.
- The implementation process provides for consultation by the AEMC before a decision on the possible application of the G20 reforms to OTC electricity derivatives is taken by the Commonwealth Treasury.
- In practice, this question is being addressed as part of the AEMC's current review into financial market resilience.

The AEMC, through the financial market resilience review, is working with the Commonwealth Treasury, the Australian Securities Investment Commission, the Australian Prudential Regulation Authority, relevant banks and industry stakeholders to develop recommendations about the potential application of the G20 reforms to OTC electricity derivatives.

### Regulatory process

While the outcomes of major AEMC reviews (Power of Choice, Transmission Frameworks) were generally welcomed in workshops and submissions, stakeholders were also concerned about uncertainty resulting from the long timeframes of reviews and regular changes to the rules – referred to by one participant as 'reform with no end in sight'.<sup>73</sup>

We need to strike a balance between ensuring sufficient consultation on, and transparency of, our decisions, and minimising the regulatory burden on stakeholders.

The rule change and review processes we administer are seen by stakeholders as transparent, predictable and consultative. However, there is also a view that they take too long.<sup>74</sup> In its inquiry report on electricity network regulatory frameworks, the Productivity Commission also raised concerns that the rule change process can often take too long. In particular, it raised concerns about the length of rule change processes that follow from the reviews undertaken by the AEMC for SCER. We have also been conscious of this concern through the strategic priorities forum and other discussions with stakeholders.

We are always keen to identify process improvements that promote efficient, timely and quality outcomes. We are considering options to improve timeliness of the rule change process without undermining the features of the process that stakeholders tell us very clearly they value – extensive consultation, an opportunity to scrutinise the detailed rule drafting and a clear explanation of the reasons for our decisions.

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<sup>73</sup> AGL, *discussion paper submission*, p.2.

<sup>74</sup> Productivity Commission, *Electricity Network Regulatory Frameworks*, Inquiry Report, April 2013.

#### **Box 4 – Network regulation rule changes**

The new regulatory arrangements for network price determinations were the subject of a recent survey of investors by the Royal Bank of Canada. The bank found that stability of the regulatory regime was the most important aspect of regulation for investors, followed by consistency of decisions and predictability of outcomes. The same survey found that investors surveyed overwhelmingly viewed the changes to the rules as positive, with 79 per cent agreeing that the changes would improve regulation.<sup>75</sup>

The AER is now in the process of developing guidelines, required under the new rules, on how it intends to apply those rules in consultation with consumers and industry – the ‘better regulation’ program. These new arrangements will impact on network prices as the next determinations commence. The first businesses – TransGrid, Ausgrid, Endeavour Energy and Essential Energy in NSW – will have determinations under the new rules with effect from 1 July 2014. The new rules will also apply to the determinations of Transend in Tasmania and ActewAGL in the ACT from 1 July 2014. They will apply from the following year, 1 July 2015, to Energex and Ergon in Queensland and SA Power Networks in South Australia.

New rules may be necessary to increase incentives for efficient network expenditure but they are certainly not sufficient: the AER’s ‘better regulation’ program and approach are critical to the process. Moreover, the Australian Competition Tribunal is the appeal body for decisions made by the AER and so how it interprets the new rules will also have a bearing on the outcomes for consumers. In addition, SCER recently announced changes to the limited merits review process. These changes will focus the Tribunal’s decision on the long-term interests of consumers.

#### **Work to address this priority**

The AEMC’s current work program includes a number of projects relevant to this priority:

##### ***Transmission Frameworks Review***

The AEMC published its final report for the Transmission Frameworks Review (TFR) in April 2013. We recommended both short-term reforms to facilitate more efficient connections between generators and transmission networks, and further development of a longer-term access model for generators.

There was a high level of support from stakeholders in the Strategic Priorities consultation process for the AEMC pursuing the recommendations in the TFR. For example, GDF Suez encouraged us to continue to advocate the case for transmission reform including optional firm access, and to ‘manage the potential risk of this review being sidelined as “too difficult” by the policy makers.’<sup>76</sup>

Following approval by SCER to go ahead with the detailed testing and implementation phase of our ‘optional firm access’ model, we are currently planning this next stage. We also expect to receive rule change requests from SCER in relation to our connections recommendations.

<sup>75</sup> RBC Capital Markets, “Investor perspectives on energy market reform”, Presentation by Paul Johnston to the ENA forum, 24 July 2013.

<sup>76</sup> GDF Suez, *discussion paper submission*, p.2.

### ***Review of the national framework for distribution and transmission reliability***

The AEMC is conducting a review to develop national frameworks for expressing, setting, delivering and governing transmission and distribution reliability in the NEM. It is due to be finalised in late 2013.

In its submission to the Strategic Priorities discussion paper, the Energy Networks Association called for us to ensure that the approach taken to meet reliability standards by network businesses reflects consumers' willingness to pay.<sup>77</sup>

The final report for the distribution workstream was published in September 2013 and recommends a framework which promotes greater efficiency, transparency, and community consultation in how reliability levels are set and provided across the NEM. In particular the framework would:

- Compare the costs of building and maintaining electricity networks against reliability outcomes. Costs to customers of interruptions to supply could then be used to guide the setting of reliability targets. This would be a more economically efficient way to determine appropriate levels of reliability in distribution networks, and could lead to more efficient investments by network businesses as well as to electricity prices consistent with customer needs.
- Provide an independent process that separates the body responsible for providing reliability from the body responsible for setting reliability targets.
- Set reliability targets ahead of the need to invest. This will provide transparency and certainty to market participants regarding the level of reliability they can expect, and will increase the accountability of network businesses for the level of reliability provided.
- Provide consistent national expression of the measurements of reliability performance in distribution networks. This will allow customers to better understand how the cost of electricity relates to the levels of reliability provided. It will also allow the AER to better benchmark reliability performance and to improve its ability to determine revenues consistent with the efficient delivery of required levels of reliability.

The final report for the transmission workstream is expected in November 2013.

### ***Advice on linking NEM reliability parameters with the value of customer reliability (VCR)<sup>78</sup>***

In its submission, SACOSS called for the AEMC to take a leadership role on VCR, as it considers VCR is currently being treated in disparate ways by AEMC, AER, AEMO and jurisdictional regulators.<sup>79</sup>

In response to recommendations in our review of the effectiveness of NEM security and reliability arrangements in extreme weather events, SCER has asked us to provide advice on linking VCR to the reliability standard and reliability settings. To help prepare that advice, we will publish a consultation paper in October 2013.

### ***Reliability Panel Review of Reliability Standard and Settings***

The reliability standard and reliability settings in the NEM are important mechanisms to encourage sufficient investment in generation capacity.

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<sup>77</sup> ENA, *discussion paper submission*, p.2.

<sup>78</sup> See also the discussion of reliability in the consumer priority chapter.

<sup>79</sup> SACOSS, *discussion paper submission*, p.2.



Under the National Electricity Rules (NER), the Reliability Panel is required to review the reliability standard and reliability settings once every four years. This regular review allows the panel to take into account any changes in market arrangements and consider whether the reliability standard and reliability settings remain appropriate, or whether changes are needed so that these mechanisms continue to meet the requirements of the market, market participants and consumers.

This current review will consider the reliability standard and settings to apply from 1 July 2016. The panel published an issues paper for the review in May 2013, and is required to complete a review of the reliability standard and settings by 30 April 2014.

#### ***Reliability Panel annual market performance review***

Each year, the Reliability Panel reviews the performance of the NEM in terms of the reliability and security of the power system. This review considers the reliability, security and safety of the NEM in terms of performance against standards and guidelines determined by the panel under the National Electricity Rules (NER).

The panel has been conducting this annual review since 2006. The review considers the performance of the NEM bulk wholesale electricity systems. Where information was available, performance at local transmission and distribution levels has also been included in the report.

The 2012 market performance review was published in March 2013. The review found that in 2011-2012 there was no USE due to reliability events and that the average USE for all regions continued to remain within the reliability standard.

#### ***NEM Financial market resilience review***

The AEMC is reviewing the effectiveness of arrangements to deal with retailers who get into financial difficulties. We are considering whether changes are required to provide more confidence that, if large and medium-size retailers get into financial difficulties, there will be no contagion effect.

During 2013 we will be making recommendations to SCER about changes that may be needed. In June 2013 we published a first interim report with draft recommendations to reduce risks that might arise following the financial distress or failure of a large electricity retailer.

#### ***Negative offers from scheduled network service providers rule change***

A rule change has been proposed by International Power-GDF Suez Australia (IPRA) and Loy Yang Marketing Management Company (LYMMCo) to set a floor price of zero for the offers of scheduled network service providers (SNSPs).

The proponents are concerned that negative offers from SNSPs can cause some generators to have an effective offer that is below the price floor, because generator and SNSP offers are additive. IPRA and LYMMCo believe this leads to inefficient outcomes, since such generators will be dispatched in place of others that cannot offer less than the price floor. Consequently, the proponents seek to introduce a price floor of zero.

SNSPs are currently only subject to a price cap. The proponents consider that this is an error and that, even if their proposed rule is not made, a price floor should be introduced.

The AEMC published a draft rule determination on this proposed rule change on 26 September 2013.

*NSP expenditure objectives rule change*

On 19 September 2013 the AEMC made a final determination in relation to a rule change request, from the Standing Council on Energy and Resources, on expenditure objectives in chapters 6 and 6A of the National Electricity Rules.

The rule gives primacy to jurisdictional standards for reliability, security and quality of supply in the objectives, where these standards exist. This will clarify how existing objectives work together in relation to these measures.

We also considered whether similar clarification is required in relation to safety. However, we decided the objectives should continue to refer to maintaining current levels of safety. This is because current levels of safety may have been appropriately influenced by safety standards in voluntary industry codes or Australian standards that sit on top of regulated standards.

Similarly, we determined that the current form of the objectives should also be preserved where no regulatory obligations or requirements exist. We believe that the issue of how the existing objectives work together does not arise where there are no regulated standards, so we do not propose to amend the objectives for this scenario.

# Appendix 1: Summary of submissions

The table below summarises substantive points made in submissions to the discussion paper which are not directly referenced in the main body of this final report.

We received submissions from the following stakeholders:

Alinta Energy

AGL

APA Group

Australian Pipeline Industry Association (APIA)

Conservation SA

EnergyAustralia

Energy & Water Ombudsman NSW (EWON)

Energy Efficiency Council

Energy Networks Association (ENA)

Energy Retailers Association of Australia (ERAA)

GDF SUEZ Australian Energy (GDF Suez)

Hydro Tasmania (2 submissions)

Origin Energy

Sligar and Associates

South Australian Council of Social Service (SACOSS)

Total Environment Centre

National Generators Forum (NGF)

Description of issue	AEMC response	Stakeholder
<b>Challenges and developments</b>		
Support for the strategic priorities review process, which provides an opportunity for stakeholders to raise issues not directly related to particular segments or elements of the market for consideration in forward planning.		Energy Retailers Association Australia Sligar & Associates
Distributed generation and demand-side issues should form their own priority in the Strategic Plan and the Strategic Priorities should frame demand-side issues similarly to supply-side issues, focusing on establishing structures that support and facilitate demand management by both service providers and consumers.	We have considered this issue as part of the Consumer and Market priorities. Demand side participation was the focus of the AEMC's Power of Choice review and SCER has begun implementing the recommendations of this review through rule change requests. Chapter 2 refers.	Energy Efficiency Council
In order to reflect the biggest recent and likely change to energy markets, and in view of the long-term interests of consumers, the AEMC needs to adopt a fourth strategic priority - to ensure that the NEM develops in a way that is consistent with ensuring a transition to renewables and a safe climate.	Adopting a priority of this nature would require the AEMC to consider objectives currently outside the NEO. Chapter 4 discusses our views on the benefits of the current allocation of roles and objectives between governments and market institutions.	Total Environment Centre
The future of GreenPower and renewable energy consumer markets. Support for a greater focus on planning and finding ways to build a green electricity transmission grid that supports the faster transition to renewable energy, rather than overly focusing on rules based approaches.	See comment above. Chapter 4 refers.	Conservation Council of South Australia
AEMC's successful implementation of the network regulation rule changes and the national framework for electricity distribution network planning and expansion. The Economic Regulation of Network Service Providers rule change process generally provided a balanced refinement of the existing incentive-based regulatory framework.	Chapter 4 refers.	ENA
Support for the broad strategic themes as outlined in the discussion paper but encourage the AEMC to include two further strategic themes - the need to actively support the Transmission Frameworks Review recommendations and market design.	Chapter 4 refers.	GDF Suez Australia Energy (GDF Suez)

Description of issue	AEMC response	Stakeholder
<b>Consumer priority</b>		
Support for retail price deregulation and the promotion of competitive retail markets	Chapter 2 refers	AGL Alinta Energy Energy Australia ENA ERAA Origin Energy
Regional derogations under the National Energy Customer Framework (NECF) should be limited as far as possible and as soon as possible to promote a high degree of consistency across NEM regions.	Chapter 2 refers.	Energy Australia
A review should be undertaken of options to ensure that Distribution Network Service Providers (DNSPs) deliver an appropriate balance of supply-side and demand-side investment.	This issue was considered in Power of Choice and we expect to receive a rule change request from SCER to implement one of the recommendations to improve the incentive framework for DNSPs.	Energy Efficiency Council
Support for competition in metering services.	This was a recommendation of Power of Choice and is consistent with the Consumer priority that competition should drive efficiency and innovation in service delivery.	AGL
Differing views on the value of the Power of Choice recommendation for a demand response mechanism.	Chapter 4 refers.	GDF Suez Australia Energy (GDF Suez)
Support for competition in metering services.	SCER has asked AEMO to draft a rule change to be submitted to the AEMC. Once we have received the rule change, the AEMC will be consulting with stakeholders on implementation details and seeking views on whether the rule change promotes the National Electricity Objective.	Alinta Energy AGL
There is a need for increased transparency to enable more proactive advocacy from consumers. There are three main steps that should be taken to improve this situation: 1. Publication of annual performance of the NEM in relation to the five stated criteria by which the current NEO is assessed. 2. Extension of reporting to the demand side of the market. 3. Publication of retailer fuel mix data.	A number of reports are carried out annually on the performance of the NEM. The Reliability Panel annual market performance review (referred to in chapter 4) reports on reliability, security and safety of the NEM against the standards and guidelines determined by the panel under the NER. The AER state of the energy market report provides annual data on a range of measures, including retail prices, wholesale prices, demand, capacity, generation investment, interregional trade, demand side participation, reliability of supply, network revenues, network investment and network performance.  The details of retailers' contracts with generators are commercially confidential.	Total Environment Centre
Customers' views are important for network planning. Network businesses have evolved their own engagement strategies to inform their planning.	Chapter 2 refers.	ENA
Cost reflective network tariffs are critical in driving economically efficient responses.	Chapter 2 refers.	GDF Suez Energy Efficiency Council
Information and education of customers is essential when contemplating fundamental changes to retail offers. Consumer awareness measures need to go beyond mere information, and actually empower consumers to take advantage of new pricing and technology choices.	Chapter 2 refers.	GDF Suez Hydro Tasmania
Robust and reliable VCR estimates have important roles to play in the fair allocation of costs in the NEM and this forms a fundamental part of pursuing the NEO.	Chapters 2 and 4 refer.	SACOSS

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<b>Gas priority</b>		
Widespread support for gas market scoping study.	Chapter 3 refers.	Alinta Energy ENA EnergyAustralia Energy Efficiency Council Hydro Tasmania
Looming problem is one of market tightening and rising prices. This is not a market design issue or an issue that lends itself to a regulatory solution. It is a commercial issue that requires a government response to remove obstacles to further supply.	Chapter 3 refers.	AGL
Greater focus is required on facilitation of LT contract formation.	Chapter 3 refers.	Hydro Tasmania
AEMC should facilitate development of a market design that would involve taking existing gas assets and designing ideal market to be worked towards as light on the hill.	Chapter 3 refers.	Hydro Tasmania NGF
There are no material problems with the current functioning of the market. It is important to assess costs and benefits of current arrangements. Not clear that the development of further market mechanisms will assist in more efficient outcomes.	Chapter 3 refers.	Origin Energy APIA APA Group

Description of issue	AEMC response	Stakeholder
<b>Market Priority</b>		
The importance of consistent policies and measures cannot be undervalued.	Chapter 4 refers.	AGL
The AEMC must view efficiency as a holistic concept that explicitly recognises the need to balance different types of efficiency: allocative, productive, dynamic, social, environmental.	Chapter 4 refers.	Total Environment Centre
AEMC complains that policy uncertainty from environmental policies external to the NEM is destabilising, but on the other hand, it has been consistently reluctant to take the lead by internalising environmental issues.	Integrated and coordinated policy development is key to achieving outcomes in consumers' long term interests. Chapter 4 refers.	Total Environment Centre
The reform agenda does not ensure that a formal public policy link between market outcomes and social and equity issues is preserved.	Integrated and coordinated policy development is key to achieving outcomes in consumers' long term interests. Chapter 4 refers.	SACOSS
The most significant initiative which AEMC could take under this priority is to ensure Governments are well informed about the impact of their decisions.	Chapter 4 discusses the importance of consultation and integrated policy making.	Hydro Tasmania
The AEMC is best placed to work with industry to undertake market development functions in the Australian energy market, reflecting the intention of policy makers in establishing a market development and rule making body separate from the regulator and market operator.	Chapter 4 refers.	APA Group

Notes:

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