ISSUES PAPER

ELECTRICITY PRICING IN QUEENSLAND

October 2015
Submissions

Closing date for submissions: 16 November 2015

Public involvement is an important element of the decision-making processes of the Queensland Productivity Commission (QPC). Submissions are invited from interested parties concerning its Electricity Pricing Inquiry. The QPC will take account of all submissions received by the due date.

Submissions, comments or inquiries regarding this paper should be directed to:

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Confidentiality

In the interests of transparency and to promote informed discussion, the QPC would prefer submissions to be made publicly available wherever this is reasonable. However, if a person making a submission does not want that submission to be public, that person should claim confidentiality in respect of the document (or any part of the document).

Claims for confidentiality should be clearly noted on the front page of the submission and the relevant sections of the submission should be marked as confidential, so that the remainder of the document can be made publicly available. It would also be appreciated if two copies of each version of these submissions (i.e. the complete version and another excising confidential information) could be provided. Where it is unclear why a submission has been marked 'confidential', the status of the submission will be discussed with the person making the submission.

While the QPC will endeavour to identify and protect material claimed as confidential as well as exempt information and information disclosure of which would be contrary to the public interest (within the meaning of the Right to Information Act 2009 (RTI)), it cannot guarantee that submissions will not be made publicly available.
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THE ROLE OF THE QPC

Our role is to provide independent advice on complex economic and regulatory issues, and propose policy reforms, with the objective of driving economic growth, lifting productivity, and improving living standards across Queensland. Open and transparent public consultation will underpin these functions.

The QPC has initially been set up as a government entity under the Public Service Act 2008, and is part of Queensland Treasury.

The Government has announced its intention for the QPC to be converted to a separate legal entity as a statutory body under its own legislation. The Queensland Productivity Commission Bill 2015 was introduced into the Queensland Parliament on 15 September 2015.

Our work encompasses three key streams:

- economic reform and policy
- regulatory advice and guidance to departments
- economic research into private and public sector productivity

The philosophy and principles under which we operate will be based on independence, rigour, responsiveness, openness, transparency, equity, efficiency and effectiveness.

Our operation and reporting is independent, with tasks referred to the QPC by the Government.

The Government has said that the final report for each inquiry will be publicly released. The QPC’s final reports will first be submitted to Government to allow a government response at the same time as the public release where appropriate.
ABOUT THE ELECTRICITY PRICE INQUIRY

Objective
The objective of the Electricity Price Inquiry is to examine electricity pricing in Queensland and provide the Government with options that improve outcomes for consumers, while balancing the objectives of:

- a competitive electricity market
- productivity growth in the energy industry and among energy users
- appropriate reliability, safety and security of electricity supply
- efficient investment and operation of electricity infrastructure
- environmental outcomes
- fairness and equity
- minimising impacts on vulnerable customers; and
- responsible and measured management of the State’s finances.

Scope
The Terms of Reference ask us to provide options to:

- promote the long-term interests of electricity consumers
- place downward pressure on electricity prices; and
- ensure a dynamic and responsive pricing framework.

The Inquiry is to examine the underlying drivers of electricity prices to develop options which can deliver a net benefit to the economy while protecting vulnerable customers. The complete Terms of Reference for this Inquiry are included as Appendix A.

Key dates
Issues Paper released
October 2015

Due date for submissions
16 November 2015

Release of Draft Report
29 January 2015

Due date for submissions
mid March 2016

Final Report submitted to government
31 May 2015

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Register your interest – www.qpc.qld.gov.au/contact-us/
If you wish to participate in the QPC’s inquiry process, please register your interest to ensure you receive our email alerts on key developments including release of reports, calls for submissions and details of public inquiries.
This chapter provides contextual information on the Queensland electricity market and issues and provides context for questions in later chapters of the Issues Paper.

1.1 Current Queensland Government policy

The Queensland Government has a broad remit and responsibilities at both state and national level in relation to electricity supply. These include regulatory and policy responsibilities at both state and national levels, as well as operational interests through its shareholder role.

The Queensland Government has prioritised some interests in electricity supply in the state, in particular in regards to electricity pricing and promotion of renewable energy sources.

In commissioning this Inquiry, the Queensland Government has asked us to pay particular regard to promoting the long-term interests of electricity consumers, putting downward pressure on electricity prices, and ensuring a dynamic and responsive pricing framework.

We are also undertaking a Solar Fair Price Inquiry commissioned by the Queensland Government which will investigate a fair price for solar exports that is based on the public and consumer benefits of solar exported energy, but does not impose unreasonable costs on electricity customers. It will be progressed in parallel with this Inquiry, and they will have regard to each other as relevant.

We note also the government’s commitments to investigate a target for renewable generation, including a commitment to encourage the uptake of solar PV.

1.2 Overview of the electricity supply chain

The Queensland electricity supply sector consists of electricity generators, transmission and distribution network service providers (often referred to as the ‘poles and wires’) and retailers. Small-scale generation provided by solar photovoltaic (PV) rooftop panels is an increasingly important part of the sector. An overview of the key features of Queensland’s electricity supply arrangements is provided in Table 1.
Table 1 Overview of Queensland's electricity supply arrangements

<table>
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<th>Supply-chain component</th>
<th>Features</th>
<th>Cost drivers</th>
<th>How prices are set</th>
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<td>Generation</td>
<td>Transmission</td>
<td>Distribution</td>
<td>Retail</td>
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<td>Electricity is generated by large power plants and small generators (eg. solar power).</td>
<td>Electricity is transmitted long distances along the high-voltage network.</td>
<td>Electricity is reticulated through the distribution networks from transmission connection points and smaller directly-connected generators to customers.</td>
<td>Electricity is sold to customers.</td>
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<td>Approximately 14,500 megawatts (MW) total generation capacity:  59% coal fired  26% gas fired  9% renewables  3% pumped-storage hydro  3% distillate.</td>
<td>More than 13,000 km of high-voltage lines.</td>
<td>More than 200,000 km of power lines (equivalent to wrapping around the planet five times).</td>
<td>Full retail contestability was introduced in 2007, giving many customers a choice in retailers.</td>
<td></td>
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<tr>
<td>Reflects the cost of producing electricity, such as plant capital, fuel and operating costs.</td>
<td>Reflects the cost of transporting electricity, including the capital costs of building, maintaining and operating the high voltage network.</td>
<td>Reflects the cost of transporting electricity, including the capital cost of building, maintaining and operating the distribution network.</td>
<td>Reflects the costs of purchasing wholesale electricity to match the customers' demand and of customer service functions.</td>
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<tr>
<td>Prices are set in a competitive market by generators offering supply into a wholesale electricity spot market, and by participants writing future supply contracts based on that market.</td>
<td>The networks are geographic monopoly businesses whose revenue and prices are controlled by a national regulator (the Australian Energy Regulator, AER).</td>
<td>Default prices for small customers and most large customers in regional Queensland (standard retail contract customers) – the notified prices — are set by the Queensland Competition Authority (QCA). Prices for market retail contract customers are set by agreement with their retailers.</td>
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<td>The government owns or controls 65% of NEM connected generation (through CS Energy and Stanwell Corporation) and the remainder is privately owned.</td>
<td>The government owns 100% (Powerlink Queensland).</td>
<td>The government owns 100% (Energex in South-east Queensland (SEQ) and Ergon Energy Corporation Limited (EECL) in regional Queensland).</td>
<td>There are 27 licensed privately owned retailers, with 16 active providers operating mainly in SEQ. Publicly owned Ergon Energy Queensland provides retail services to standard retail contract customers in regional Queensland.</td>
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</tbody>
</table>

Source: Adapted from Department of Energy and Water Supply Directions Statement 2012

1 Excluding the Ergon Energy isolated systems.
2 A customer who is supplied electricity via a standard retail contract and is charged at the regulated retail tariff price/rate is referred to as a standard retail contract customer. Regulated retail tariffs are currently set annually by the QCA. Customers on a standard retail contract can switch retailers at any time and there are no late payment fees or fees for terminating the contract. Prior to 1 July 2015, a standard retail contract customer was referred to as a ‘non-market’ customer.
3 A customer who has negotiated a market retail contract with a retailer of their choice, and is charged at the negotiated price/rate (including discounts) set by the retailer is referred to as a market retail contract customer. Most market retail contracts offered in Queensland are for a set term and customers wishing to switch retailers before the expiry of their current contract will generally be expected to pay a termination (exit) fee.
Queensland is part of the National Electricity Market (NEM), which supplies electricity to grid-connected customers across all states and territories except Western Australia and the Northern Territory. Creation of the NEM was a key element of broader Competition Policy reforms, as were structural changes to Queensland’s electricity supply industry that have been implemented progressively since the mid-1990s. Over the last two decades, the Queensland electricity sector has changed from being dominated by Government-owned monopoly businesses to a competitive electricity market with both public and private sector participants.

The NEM and its frameworks are guided by the National Electricity Objective (NEO) which is specified in the National Electricity Law. The NEO is to –

\[ \text{promote efficient investment in, and efficient operation and use of, electricity services for the long} \]
\[ \text{term interests of consumers of electricity with respect to –} \]
\[ (a) \text{ price, quality, safety, reliability and security of supply of electricity; and} \]
\[ (b) \text{ the reliability, safety and security of the national electricity system.} \]

### 1.3 Retail competition in Queensland

Before 1998 almost all electricity customers in Queensland were supplied by government-owned retailers and paid the regulated retail tariff set by the Queensland Government. A retail tariff is the amount charged to a customer by a retailer for providing electricity.

Very large business customers have had the option to choose their electricity retailer since 1998, and the threshold for competition was progressively lowered for large business. In July 2012, access to regulated tariffs for large business customers in SEQ was removed. At that time, fewer than five per cent of large customers were supplied via the regulated tariffs.

Residential and small business customers in Queensland have been able to choose their electricity retailer since July 2007, when Full Retail Competition (FRC) was introduced, although competition has largely been limited to South East Queensland (SEQ). Once competition was introduced, customers could choose to enter into a market contract with a retailer of their choice (at a tariff agreed with the retailer) or remain on a regulated tariff.

Since 2007 regulated retail tariffs have been set annually by the QCA, consistent with the Electricity Act 1994 (Electricity Act). There are 26 regulated retail tariffs available to eligible residential, small business, large business and farming/irrigation customers. The retail tariffs are published annually in the Queensland Government Gazette in the form of a Retail Tariff Schedule.\(^6\)

Regulated tariffs do not constrain the price a retailer may offer a customer and it is possible for a retailer to market an offer including higher prices. In practice, regulated tariffs have acted as a price cap and a reference point for the competitive segment of the retail electricity market.

Competition has led to a greater choice of retailers, with 16 retailers actively supplying customers in the Queensland retail market, mainly in SEQ.\(^7\) In SEQ, around 70 per cent of residential and small business customers are on market contracts and 30 per cent remaining on a

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\(^4\) Section 7 of the National Electricity Law Schedule to the National Electricity (South Australia) Act 1996.

\(^5\) Regulated tariffs can also be called notified prices.


\(^7\) Queensland Competition Authority (2015a), Final determination: Regulated retail electricity prices for 2015-16, page 35.
regulated tariff. In regional Queensland, 27 percent of large customers are on market contracts, but very few residential and small business customers have moved from regulated tariffs.

The AEMC undertakes an annual assessment of retail competition in NEM jurisdictions. Its 2015 review made a number of recommendations to improve competition and customer outcomes. This is discussed in more detail in Chapter 3.

1.4 Increases in electricity prices

After almost a decade of no or CPI only electricity price increases, retail electricity prices in Queensland have increased sharply since 2007. Figure 1 shows that the annual bill for a typical Queensland residential customer (Tariff 11) increased by over 109 per cent in nominal terms from $634 in 2007-08 to $1,326 in 2015-16. This is equivalent to a real increase of around 71 per cent. The standard bill for a typical small business (Tariff 20) has increased by around 76 per cent, in nominal terms from $1,050 in 2007-08 to $1,843 in 2015-16. This is equivalent to a real increase of around 43 per cent.

Figure 1 Average Queensland residential (Tariff 11) annual bills 2006-07 to 2015-16 ($, nominal)

Source: Department of Energy and Water Supply, based on average usage of 4,053 kWh/annum

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8 Ibid., page 37.
As Figure 2 shows, similar price increases have also been evident in other Australian states.

Figure 2  Retail electricity price index (inflation adjusted) — Australian capital cities

![Retail electricity price index](image)


Electricity costs makes up around 1.6 per cent of a middle income household’s annual disposable income. For low income households (without a concession) electricity represents around 4.8 per cent of annual disposable income and rising prices have resulted in some experiencing budget difficulties.  

1.4.1 Retail electricity pricing cost components

The costs used to determine retail electricity prices broadly fall into three categories:

- **Energy** — the costs associated with generating electricity in power stations for sale to retailers and with the satisfaction of Renewable Energy Target (RET) obligations
- **Network** — the costs associated with delivering electricity through ‘poles and wires’ to customers; and
- **Retail** — the costs associated with selling electricity to customers such as billing, customer service, marketing and inquiries.

Figure 3 shows that network costs (excluding any Solar Bonus Scheme (SBS) impact) have driven retail price increases in recent years. Network costs increased by 243 per cent in real terms over the past decade and are now around 45 per cent of a typical residential bill.  

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Since 2004, significant capital expenditure to meet higher reliability standards and growth in peak demand has improved network capability and performance,\textsuperscript{12} but increased network prices. The AER’s 2010 revenue determinations for Energex and Ergon Energy coincided with uncertainty in world financial markets, and a higher regulated rate of return on the distributors’ assets. The rapid uptake of solar PV under the SBS added further pressure on network prices.

Reductions in network costs under the distributors’ new revenue determination (effective 1 July 2015) are expected to contribute to the easing of electricity price growth from 2015-16. The QCA determined the network component of regulated tariffs (including metering) had decreased in 2015-16 by 2.9 per cent (or $42 annually) for a typical residential customer on Tariff 11 and by 5.9 per cent (or $99 annually) for a typical customer on the main small business tariff (Tariff 20).\textsuperscript{13}

The cost of generating and purchasing electricity from the wholesale market (including costs associated with sourcing renewable energy) makes up around 32 per cent of a typical residential bill. These costs have remained relatively stable in recent years, mainly due to an oversupply of generation in the NEM. For 2015-16, the costs of purchasing wholesale energy are expected to be similar to last year.

The costs associated with environmental policies, including the Australian Government’s RET and the Queensland Government’s SBS have had an impact on the final prices consumers pay, and are expected to continue to do so. The QCA’s allowance for environmental scheme costs in the notified tariffs increased in 2015-16 and these costs make up around 11 per cent of a typical residential bill (8 per cent attributed to the SBS and 3 per cent to the RET).

Retail costs currently make up around 23 per cent of a typical residential customer’s bill as shown in Figure 3. While the retail cost component has shown moderate growth in recent years, these costs are expected to remain stable, or decrease slightly, in 2015-16.

\textsuperscript{12} Somerville D et.al. (2011), \textit{Electricity network capital program review 2011: Detailed report of the independent panel}, Brisbane, page 65.

\textsuperscript{13} Queensland Competition Authority (2015b), \textit{op. cit.}, page 1; Queensland Competition Authority (2015a), \textit{op. cit.}, page 52.
1.4.2 Build-up of retail tariffs

Each year, the QCA estimates the costs of supply for each regulated retail tariff using an ‘N+R’ cost build-up approach, with the QCA determining the R (energy and retail costs) component and adding this to the N (network cost) component, which is separately approved by the AER. For residential and most small business customers, these regulated tariffs are based on the costs of supply in SEQ, with the N component mostly based on Energex’s network charges and relevant tariff structures due to the Uniform Tariff Policy.

1.4.3 Recent changes in the electricity market

The nature and function of electricity markets is evolving with new technologies and competition now playing a more dominant role and increasing consumer choice. In recent years, the NEM has been impacted by:

- technological and price changes which have given electricity users the motivation and the opportunity to change the way they consume and in some cases (e.g. PV) produce electricity
- sustained declining consumption from the grid and little or no growth in peak demand
- uncertainty about the future availability and price of gas as a generation fuel, the carbon price and environmental policy, which will likely shape the mix of technologies providing Queensland’s electricity supply in the longer term; and
- changes made to the rules and tools available to the AER for setting network prices.

These changes are creating new challenges and opportunities for existing business models, structures and policy in the electricity market, and are also contributing to changing cost pressures for electricity pricing. The COAG Energy Council’s July 2015 meeting focussed on issues relating to technology, innovation and market change, and is progressing priority projects to address associated impacts on consumers and industry.

1.5 Environmental policies

Environmental policy is a shared responsibility of federal and state governments. Policies have been implemented by both the Australian and Queensland Governments aimed at achieving environmental objectives (including carbon emissions reduction and promoting renewable generation) and have impacted on electricity prices.

1.5.1 Renewable energy target

The Mandatory Renewable Energy Target (MRET) was established in 2001 to encourage generation of an additional two per cent of electricity from renewable sources by 2010. The MRET was replaced by the RET and in 2010, the scheme was expanded to ensure that, by 2020, renewable energy would meet 20 per cent of national electricity requirements.

In 2011, the Australian Government split the RET into two parts:

- a Large-scale Renewable Energy Target (LRET) of an additional 41 000 GWh of renewable energy generation by 2020; and

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14 Ibid., page 49.
- an uncapped Small-scale Renewable Energy Scheme (SRES), with a notional 4,000 GWh target.

In 2015, following a review of the RET\(^{17}\), the Australian Government reduced the LRET to 33,000 GWh by 2020 – more accurately reflecting a 20 percent target under lower projected demand conditions.

1.5.2 Carbon reduction schemes

A carbon pricing scheme was introduced by the Australian Government in 2012. It required entities emitting over 25,000 tonnes per annum of carbon dioxide equivalent greenhouse gases, and which were not in the transport or agriculture sectors, to obtain emissions permits. Initially, the price of permits was fixed and was to increase annually until 2015 when it was planned for the market to set the cost through a flexible cap and trade emissions trading scheme.

Following the 2013 federal election, the Australian Government abolished the carbon pricing scheme, and replaced it with the Direct Action Plan. The centrepiece of the Direct Action Plan is an Emissions Reduction Fund to provide direct financial assistance to organisations and individuals for the adoption of new technologies and practices to reduce emissions.

1.5.3 Solar Bonus Scheme

The Queensland Government introduced the SBS in July 2008 to encourage investment in solar photovoltaic renewable electricity generation. Its central element was a government-mandated and distributor-funded feed-in tariff of 44 cents per kilowatt hour (kWh), payable for electricity generated from solar photovoltaic (PV) systems and exported to the Queensland electricity grid. The SBS was available to small residential and business customers, consuming less than 100 megawatt hours (MWh) per year, with grid-connected systems of 5 kilowatt (kW) or less.

The Queensland Government lowered the mandated tariff to 8 cents per kWh on 9 July 2012 for new customers joining the SBS after that time. This rate continued to apply until 30 June 2014, after which the distributor-funded 8 cents per kWh tariff:

- was removed for customers in SEQ, who were required to negotiate a rate with their retailer; and
- was replaced by a price set annually by the QCA for customers in regional Queensland (outside of Energex’s distribution network).

All customers who joined the SBS prior to 9 July 2012 are permitted to continue to receive the 44 cent per kWh rate until 2028, provided they remained eligible.

1.5.4 Renewables election commitments

During the 2015 election, the new Queensland Government committed to:

- investigate how Queensland can achieve a target of 50 per cent renewable energy by 2030
- a target of one million rooftops having solar panels by 2020
- a QPC review to identify a fair price for solar power produced by small customers and exported to the electricity grid; and
- a trial 40-megawatt renewable energy auction to support private investment and jobs in the renewable energy industry.\(^{18}\)


\(^{18}\)
1.6 **Regulation**

1.6.1 **National governance and regulation**

Since the commencement of the NEM, regulation of the electricity supply sector has moved from being predominantly state-based, to a largely nationally-harmonised system. Figure 4 outlines the regulation and governance arrangements for the NEM.

A number of Council of Australian Government (COAG) agreements underpin the operation of the NEM. Key to these is the Australian Energy Market Agreement (AEMA) which outlines roles and responsibilities in relation to the operation of the NEM, as well as the collective ambition of jurisdictions for national harmonisation of energy laws.

**Figure 4  Regulation of the National Electricity Market**

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<td></td>
<td>AEMO’s main responsibility is to balance the demand and supply of electricity by dispatching the generation necessary to meet demand in a least-cost way, AEMO is responsible for the management of the national electricity grid, overseeing reliability and security, directing generators to increase production during periods of supply shortfall, and instructing load shedding to rebalance supply and demand to protect power system operations. AEMO also has responsibility for national transmission planning in eastern and southern Australia, electricity emergency management and facilitation of full retail competition through operation of customer transfer and associated systems.</td>
<td>The AER is the NEM regulator. The AER sets the prices charged for using energy networks; monitors wholesale electricity markets to ensure suppliers comply with the legislation and rules; publishes information on energy markets; and assist the Australian Competition and Consumer Commission (ACCC) with energy-related issues. The AER is also responsible for regulation of the retail electricity markets in jurisdictions that have adopted the NERL which is a schedule to the National Energy Retail Law (South Australia) Act 2011. The NERL, together with the National Energy Retail Rules (NERR), establishes the National Energy Customer Framework (NECF)</td>
<td>The AEMC is responsible for developing the NER and conducting independent reviews of energy markets. It is required to assess any proposed change to the NER against the National Electricity Objective. Once it makes a final determination on a proposed rule change, the NER are amended.</td>
</tr>
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</table>

*Source: Adapted from Senate Committee — Final Report: Reducing energy bills and improving efficiency 2012*

1.6.2 **Queensland Government regulation**

While many of the governance and regulatory arrangements for electricity supply in Queensland are now set at a national level, the Queensland Government continues to have an important policy and regulatory role.

The AEMA preserves jurisdictional responsibility for specific matters. These include retail pricing and network reliability settings.

The AEMA and the NEL also provide for jurisdictions to derogate from nationally-harmonised laws — that is, to vary the national laws through jurisdiction-specific requirements or obligations.

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18. The Queensland Government announced on 9 September 2015 that it would exceed the original target, expecting to achieve a 60 megawatt target via the renewable energy auction.
For example, in applying the NERL, Queensland has retained a number of consumer protections and safeguards to support consumers in regional Queensland and address regional issues.

The Queensland Government also remains responsible for development approvals for new generation and transmission and distribution infrastructure, setting of network reliability standards and retail price regulation. Other State legislation governs related matters:

- the *Sustainable Planning Act 2009* prescribes planning requirements in Queensland, including in relation to electricity infrastructure
- the *Electrical Safety Act 2002* (Electrical Safety Act) establishes safety requirements for electrical work and equipment, including as this relates to an electricity entity’s performance.

### 1.7 Other inquiries and reviews

This Inquiry is occurring at the same time as several other current or recently completed inquiries and reviews. These other inquiries or reviews, outlined in Appendix B, may have an impact on this Inquiry. We will take the results of this recent work into consideration as relevant.
2 PRODUCTIVITY IN THE ELECTRICITY SUPPLY CHAIN

The Terms of Reference asks us to consider productivity, considering both electricity as an input to economic productivity and improving productivity in the electricity supply chain. It also asks us to consider the cost drivers underlying retail electricity prices, and to consider the expected contribution to final prices each component in the electricity supply chain is expected to make under different scenarios.

This chapter explores the key issues facing each part of the electricity supply chain over the short, medium and longer terms. These factors include market and government drivers for change and the Queensland Government’s election commitments.

2.1 Framework for considering productivity in the electricity supply chain

The Terms of Reference asks us to provide options to promote the long-term interests of electricity consumers; place downward pressure on electricity prices; and ensure a dynamic and responsive pricing framework. It also outlines a range of sometimes competing objectives. For example, policies which support a competitive electricity market may increase electricity prices for at least some customers.

For this Inquiry, we propose to test each policy being assessed against the following principles.

| (a) | Does it provide benefits which outweigh the costs? |
| (b) | Is there scope for the policy to be reviewed to achieve the same objective at a reduced cost or achieve more with the same level of funding? |
| (c) | Is the policy being delivered by the level of government (Federal, State or Local) that can best target the policy problem? |
| (d) | Does the policy yield a net productivity gain for the Queensland community? |
| (e) | Have options for mitigating significant adverse impacts of policy changes on vulnerable customers been appropriately considered? |

We note in some cases a robust assessment of the policies being considered has been limited by the absence of supporting evidence or monitoring of the costs and benefits of the policy.

2.2 Productivity in the electricity supply chain

It is generally considered that:

productivity in the electricity sector is declining. That is we are using our infrastructure less efficiently than we did and prices are going up.19

Analysis by the Australian Productivity Commission (PC) shows that following moderate to strong productivity growth in the Australian electricity sector over the preceding decades, there has indeed been an equally strong and sustained productivity downturn since the late 1990s.\(^{20}\)

Productivity growth is broadly defined as the difference in the growth of output and inputs. Productivity gains arise where the same outputs can be produced with fewer inputs, or more outputs can be produced with the same amount of inputs.

Electricity supply is highly capital intensive (particularly in the network and generation sectors), with capital investment accounting for 74 percent of total sector inputs in the decade preceding the PC’s analysis.\(^{21}\) Productivity movements in the sector are affected by lumpy investment cycles associated with long-lived assets and economies of scale. Capital investment in the sector does not lend itself to incremental change in step with other changes in the supply chain.

In the absence of strong demand growth, productivity growth in the electricity sector would need to come from capital and labour productivity improvements. The capital investment overhang from the previous decade resulting from investment related to reliability and renewable generation policies, in combination with forecast low demand growth expectations, will likely limit the requirement for capital expansion. The AER determinations for Energex and Ergon Energy identify limited augmentation capital expenditure between 2015 and 2020.\(^{22}\) Oversupply in the wholesale market may also mitigate the risk that higher-priced infrastructure will need to be built to meet government policy in relation to supporting renewable generation.

### 2.2.1 Role of the market in driving productivity

In the PC’s view, the NEM has driven productivity improvements in the energy sector, but this has been insufficient to counteract inefficient capital allocation and decreasing demand. In its 2013 review of electricity network regulation, the PC notes that

> There have been some legitimate reasons for price increases over the last few years, but the system as a whole is inefficient, and price pressures could be reduced substantially over the longer term if a coordinated set of reforms were introduced. Consumers have much to gain from the proposed reforms.\(^{23}\)

The challenge and opportunity for adaptation in the NEM appears to lie in the rate at which new technologies and other innovations can be deployed to make better use of existing infrastructure. For example, advanced metering may offer opportunities for greater automation in parts of the supply chain, reducing costs for both networks (through remote reading and efficient real-time network management)\(^{24}\) and retailers (to offset risks of unbilled energy).

### Questions

2.1 Are there changes to the structure of the electricity supply chain and its regulation that might improve the efficient delivery of a reliable supply of electricity to customers?

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\(^{21}\) Ibid., page 23.


2.2.2 **Energy productivity**

The large increases in electricity prices over the last decade have impacted consumers and business, and there is evidence of increasing elasticity in demand for electricity and changing consumer behaviour. Key areas for reform identified as offering the greatest potential for further productivity improvements include:

- cost-reflective pricing that aims to influence consumers’ consumption patterns in a way that reduces the overall system costs of meeting consumer demand
- increasing competition, driving efficiency across the supply chain; and
- end-use energy efficiency measures, including the promotion and adoption of more efficient technologies and processes.

In July 2015, the COAG Energy Council supported the development of the National Energy Productivity Plan (NEPP) – a commitment from the Australian Government’s Energy White Paper. Key objectives for the NEPP include reducing costs for energy users, maintaining competitiveness and growing the economy, reducing carbon emissions, and improving sustainability. The Council noted that inter-jurisdictional collaboration will be complemented by the programs and actions of individual jurisdictions and non-government entities.

Recent policy reforms such as relaxation of Queensland’s network reliability frameworks in 2014 are forecast to deliver capital savings in the order of $2 billion to 2030 which will ultimately flow through to reduce retail prices. The Queensland Government is maintaining its commitment to invest in national energy efficiency programs, including appliance and building standards, which are delivering productivity gains and energy cost benefits.

The NSW and Victorian governments both released energy efficiency plans in 2015. The NSW *Energy Efficiency Action Plan* has as its objective ‘to help those most affected by recent energy price rises to save money on their bills, and to investigate options for new measures that will reduce pressure on future prices’. The Victorian Government’s *Saving energy, growing jobs: Victoria’s energy efficiency and productivity statement* states that

> in an energy efficient economy, people are less vulnerable to energy price pressures. Homes have better energy performance and businesses with higher energy productivity are more profitable, which supports and creates jobs.

The Victorian Government has also reversed the decision of a former state government to close down the market-based Victorian Energy Efficiency Target scheme. The Victorian Government is evaluating the program with a view to identifying opportunities for improvement.

### Questions

2.2 What are the key areas for productivity improvement across the electricity sector, and how could these influence Queensland’s overall economic productivity?

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2.3 Generation

Coal is the dominant energy source for electricity generation in Queensland, although its share of the generation mix has reduced over the last decade. Figure 5 shows coal-fired generation represents around 73 per cent of the overall electricity supply from large-scale generators.

While coal-fired generators represent only 56 per cent, or around 8,100 MW, of the installed generation capacity in Queensland, their generally lower cost of production and continuous operation capability, particularly compared to renewables, means that they provide a greater proportion of the electricity generated. Figure 6 shows a breakdown of installed generator capacity in Queensland. Installed capacity relates to the maximum output a generator can produce under normal conditions.

Figure 5 Queensland sent out generation by type (2014)

Figure 6 Queensland installed capacity by type (2014)

Large-scale generators connected to the national electricity grid operate in the competitive NEM operated by AEMO. AEMO directs the operation and dispatch of the generators on a five-minute basis, based on prices they offer daily for supply. The NEM is intended to minimise the overall cost of meeting the electricity demand. Smaller generators, including small-scale solar PV, ‘self-dispatch’ and it is the total demand less their output which is served by AEMO’s market system.

The NEM dispatch system produces highly variable and volatile ‘spot’ energy prices which apply to retailers and other major customers supplied directly from the NEM. These participants commonly enter into electricity derivative contracts (swaps and options) to manage their risks in this market.

2.3.1 Government policy and generation mix

While new investment in the NEM is largely driven by price signals in the spot and contract wholesale markets, government policy can impact the generation mix.

Between December 1998 and June 2014, new investment added over 14,400MW of registered generation capacity to the NEM (an average of around 1,000MW per year). The expansion of the RET in 2007 contributed to 2,300MW of wind generation capacity being added in the following six years, more than tripling the existing capacity. At the same time, the Queensland Gas Scheme increased the contribution of gas-fired generation to almost 20 per cent by 2012, exceeding the mandated target. When the Scheme was introduced in 2005, gas-fired generation made up only 2.4 per cent of Queensland’s electricity generation mix.

As a combined effect of the RET, attractive government-mandated feed-in tariffs and declining equipment costs, there has also been a rapid uptake of solar PV installations.

Since 2009, and partly due to the installation of solar PV, the growth in demand for electricity through the NEM has slowed and in some years reversed. This has resulted in a surplus of generation capacity and in relatively depressed wholesale prices across the NEM. We note though that wholesale prices in Queensland have been higher than in other parts of the NEM in more recent years.\(^{30}\)

Queensland’s electricity generation market has more installed capacity than is needed to meet existing demand. AEMO has estimated\(^ {31}\) that new capacity will not be needed for Queensland until at least 2021-22, even under a high growth scenario.\(^ {32}\)

Over-supply has reduced the need for further investment, although the increasing renewables percentages mandated under the RET continue to require new renewable capacity. The majority of investment in generation capacity across the NEM over the four years to 30 June 2014 (63 per cent) was in wind generation, with the remainder in gas fired plant.\(^ {33}\)

As a result, existing plant are being decommissioned or periodically taken offline. For example, two units at Tarong Power Station were mothballed in 2012 and remain offline.

The Australian Government’s Energy White Paper noted that at a time of over-supply it is important that economic market exit not be impeded, as that may deter the entry of more efficient, lower cost and lower emission generation.\(^ {34}\)

Conversely, policy settings that prematurely force new technologies into the market can result in higher costs and lower efficiencies compared to circumstances where these technologies find their way into the market on a competitive basis.

The Queensland Government has announced it wants to achieve a target of 50 per cent renewable energy by 2030; and one million Queensland rooftops fitted with solar panels by 2020.\(^ {35}\)

### Questions

2.3 What are the potential benefits and risks in the Queensland Government’s renewable energy plans, including solar targets, for electricity sector productivity and electricity prices in the longer term?

2.4 What objectives do these plans and targets best support, and are there alternative levers or methods that might be considered?

2.5 What factors are influencing higher wholesale prices in Queensland and do these represent systemic or transient market issues?

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\(^{32}\) Compared to AEMO’s 2014 Electricity Statement of Opportunities, the low reserve condition point has been brought forward by at least three years.

\(^{33}\) Australian Energy Regulator (2014a), op. cit., page 32.

\(^{34}\) Department of Industry and Science (2015), *Energy white paper 2015*, page 56.

2.3.2 Structural reform and competition effects

During the 2015 election, the Queensland Government said it would merge the government-owned generators, CS Energy and Stanwell, to lower costs and deliver additional efficiencies.\(^{36}\)

The Queensland Government is currently investigating a range of structural and non-structural options for improving the commercial performance of these businesses.\(^{37}\) The Queensland Government has also indicated that the nature of merger arrangements should be relevant to the transforming energy market, and enable the entities to reorientate towards renewable energy opportunities.\(^{38}\)

A merger of CS Energy and Stanwell may reduce competition in Queensland’s wholesale electricity market, given the proportion of the market represented by the two businesses, and this may have implications for retail electricity prices. Rod Sims, Chairman of the ACCC noted that Queensland already had the most concentrated energy market in mainland Australia, and foreshadowed that a further reduction in competition could result in higher electricity prices in Queensland.\(^{39}\)

We note ACIL Allen considered this issue in the context of providing advice to the QCA on retail electricity prices for 2015-16, saying that,

> If the two generation portfolios were to be merged in a way that increased market concentration then wholesale prices would likely increase (all other things being equal).\(^{40}\)

However, there may be ways to mitigate competition impacts of any merger options. The Government has undertaken to ensure that competition in the market is maintained,\(^{41}\) with the final structure to be negotiated with the ACCC.\(^{42}\)

### Questions

2.6 Are there any issues associated with the existing level of competition in Queensland’s electricity generation sector, and what are the potential impacts on the wholesale electricity market?

2.7 What are the potential benefits and risks associated with structural reform of CS Energy and Stanwell in terms of supply chain productivity and electricity pricing?

2.8 What options are there to mitigate competition impacts associated with merging CS Energy and Stanwell, and maintain downward pressure on electricity pricing?

2.4 Networks (Transmission and Distribution)

There are a number of factors impacting on electricity network prices in Queensland, most of which arise from the infrastructure intensive nature of electricity networks, with comparatively lower variable (throughput-driven) costs of operation compared to the high fixed costs of owning and maintain the networks.

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\(^{41}\) Queensland Treasury (2015), op. cit., page 122.

Networks are also characterised by a degree of indivisibility, in that technical constraints mean investment requirements increase in a stepped, rather than a steady fashion as the demand being served, or the distance being covered, increases. These characteristics also give networks a ‘natural monopoly’ character as the average cost of a single network will almost always be lower than that of two or more networks serving the same load.

### 2.4.1 Recent reform environment for network businesses

Queensland’s network businesses have been the focus for reform at both national and state levels, driven by concerns about escalating costs and the impact on electricity prices.

The 2011 Energy Networks Capital Program Review and 2012 Independent Review Panel on Electricity Networks (IRP) both made recommendations aimed at reducing the costs of Queensland’s network businesses. Implementation of recommendations from these reviews has resulted in greater efficiencies in allocation of capital and operating expenditure by the network businesses, and underpins how the businesses plan and build Queensland’s networks. However, concerns continue about the efficient investment in and delivery of network services.

Changes have also been made to national regulatory frameworks governing how network businesses’ allowances are set. The AEMC’s 2012 Economic Regulation of Networks rule change gave the AER greater powers and ability to develop tools to interrogate the network businesses’ revenue proposals. The new rules are being applied in relation to Energex and Ergon Energy’s revenue determination processes for the 2015-20 regulatory control period.

The new rules provide for the AER to make greater use of benchmarking, to compare the performance of the businesses. The AER published its initial benchmarking reports in November 2014, finding that:

- when considered on a statewide average basis over the period 2006 to 2013, Queensland’s distribution network businesses were generally more productive than those in the Australian Capital Territory, New South Wales and Tasmania, but less productive than their counterparts in Victoria and South Australia;

- between 2010 and 2013, Powerlink was ranked behind all other TNSPs in the NEM, apart from Transgrid.

The Australian Competition Tribunal is currently considering the application of this benchmarking methodology as part of its merits review of the AER’s recent NSW distribution determinations.

The new rules also require greater engagement of consumers in the development of revenue proposals, in particular to establish that proposals are in the long term interests of consumers. We note that for the first time, a consumer representative group is challenging network businesses’ revenue determinations. The Australian Competition Tribunal is currently considering appeals in relation to the NSW and ACT network revenue determinations not only from the network businesses, but also by the Public Interest Advocacy Centre which is arguing that the proposed allowances are too high thereby inflating costs to consumers.

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43 Based on a multilateral total factor productivity analysis, which quantifies the overall productivity of an entity in its use of inputs (such as operating and capital expenditure) to produce outputs.
2.4.2 Peak Demand

Until recently the potential to store electricity economically has been limited. As a result, the capacity of supply facilities has necessarily had to match the demand when electricity was being used most intensively – the time of peak demand.\(^46\) In order to maintain reliability of supply in such peak periods, the network businesses have been obliged to install a degree of redundancy in their networks, and as a result the total installed capacity is seldom fully used.

While demand for electricity generally fluctuates over a day, critical peak demand occurs only a few times a year, generally when temperatures are unusually high or low. Energex estimates that 16 per cent of its network has been built to service a demand that only occurs for the equivalent of 80 hours per year, while around six per cent of Ergon Energy’s network capacity is used for only 0.1 per cent (less than nine hours) of the year.\(^47\)

These characteristics of electricity supply apply at all levels but are particularly important for networks because they have a higher proportion of fixed costs than generation (which includes large variable costs in relation to fuel and variable operating and maintenance costs) and are more capital intensive than retailing. In essence, a level of peak demand requires a level of network capacity and all customers as a group need to cover the associated costs.

2.4.3 Tariff structures

The existing flat rate tariff structure which applies to residential consumers and many small businesses comprises a small fixed or access charge and a flat volumetric charge. It does not accurately reflect the relative cost of consumption at different times and, as a result, peak electricity is under-priced while off-peak electricity is over-priced.\(^48\)

In the absence of prices that reflect these cost differences, higher consumption occurs during under-priced peak periods, and under-consumption occurs during over-priced off-peak periods. Both of these reflect a loss of economic efficiency and productivity for electricity consumers as a whole, with inefficient network investment being required to serve consumers’ demand. As a result, the tariff structure results in network prices being higher, on average, than necessary over the longer-term.\(^49\)

It also means that consumers who use more electricity at peak times are being subsidised by those who use less. Depending on the characteristics of different groups of consumers, this may represent an inequitable distribution of the network costs.

In its work for the AEMC’s Distribution Network Pricing Arrangements rule change, NERA Economic Consulting highlighted the differences between homeowners with high disposable income who may install air conditioning, and those with lower disposable income, or renters unable to secure to themselves the benefits of an air conditioner installation. It estimated the latter groups subsidise the former by around $700 per year in a situation where peak demands were driven by summer peak demand. A similar difference may occur between those who have a solar PV installation and those who do not, if they impose similar peak demands on the network.

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\(^{46}\) It is important to distinguish between electricity consumption and electricity demand. Electricity consumption refers to the amount of electricity used over a period of time, while electricity demand relates to the rate of electricity consumption at a point in time.

\(^{47}\) Interdepartmental Committee on Electricity Sector Reform (2013), Report to government, p.54


\(^{49}\) Productivity Commission (2013) *op. cit.*, pages 360-1.
and the former takes less energy from the network and hence pay around $120 per year less in network charges.  

Questions

2.9 What is the best way to recover the network costs associated with demand from electricity customers more efficiently and equitably?

2.4.4 Falling average consumption

Average consumption throughout the NEM has fallen in recent years as consumers have responded to higher prices and industrial growth has moderated.

The revenue cap regulatory framework under the NER means that if electricity consumption is below forecast and an NSP earns less revenue than its determination allows for a year, it can recover the shortfall in future years through higher prices. Lower electricity use results in higher electricity prices as fixed network costs are spread across smaller volumes of electricity.

In determining the form of regulation that would apply to Energex and Ergon Energy for the 2015-20 regulatory control period, the AER outlined its views of the relative merits of revenue and price cap regulation as follows –

We consider that a revenue cap will result in benefits to consumers through a higher likelihood of revenue recovery at efficient cost, better incentives for demand side management, less reliance on energy forecasts and better alignment with the introduction of efficient prices. Furthermore, we consider that the detriments of a revenue cap – within period pricing instability and weak pricing incentives are able to be mitigated.  

The AER’s appraisal of price cap regulation in relation to NSW electricity network businesses considered it had not encouraged the NSW distributors to adopt efficient prices, and by comparison revenue cap regulation of Queensland distributors had not discouraged the adoption of more efficient tariff structures.

Questions

2.10 How should volume risk be shared between NSPs and electricity consumers?

2.4.5 Network reliability standards

Under the NEM arrangements, State and Territory governments are responsible for setting reliability standards for the network businesses in their jurisdictions. In Queensland, network reliability requirements are established in the authorities issued to Queensland’s network businesses under the Electricity Act.

In 2004, following public concern about electricity blackouts during a severe storm season, the government decided Queensland’s network reliability standards would be based on a high level of infrastructure redundancy. This approach, referred to as ‘n-1’, required the duplication of some elements of the networks so that electricity supplies could be maintained even if one element failed or was damaged.

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52 Ibid., page 46.
This approach provided consumers with a very high level of reliability, mitigating risks of electricity supply blackouts. It came at a high cost as Energex, Ergon Energy and Powerlink were required to invest more in their network infrastructure to meet service reliability obligations.

In 2014, the Queensland Government adopted a less prescriptive approach to setting network reliability standards. The new approach focuses on customer outcomes and explicitly considers the trade-off between the level of reliability and associated costs. The new standards allow the consideration of the consequences of network capacity shortfalls in terms of loss of supply and the costs of system augmentation required to avoid them. Safety net requirements are in place to ensure that no specific customer groups receive an unacceptable reliability of supply. This approach is forecast to save approximately $2 billion of capital expenditure between 2015 and 2030\(^{13}\) and put downward pressure on future prices.

### Questions

2.11 Do Queensland’s network reliability standards effectively allocate risk between consumers and businesses, and to the extent they exist, mitigate any risks?

### 2.4.6 Future of the network business model with the emergence of new technologies

The traditional NSP business model is being challenged by emerging technologies and other innovations which are changing the ways in which electricity is sourced and utilised across the NEM. New technologies have the potential to place new physical and technical demands on the networks, as well as provide some opportunities.

New generation technologies such as small-scale solar PV may create voltage control and other operational difficulties for the networks, given the intermittent nature of their output and their concentration in some locations. Improvements in the energy efficiency of household appliances and commercial equipment will further erode network utilisation.

Emerging technologies may create new demand on the network, providing for greater use of existing network assets. For example, electric vehicle charging could offset demand otherwise eroded by increased installation of PV.

Embedded generation and storage systems at the end user level will provide consumers with greater opportunities to become independent from the grid and, even if they do not disconnect, will result in changes to their pattern of electricity draws from and injections to the network. This could impact on network energy delivery and acceptance and alter the role of the NSPs, particularly at the distribution level. This also has implications for how the value of the network connection is established where it becomes effectively a ‘backup’ for embedded generation.

These challenges are already evident with the growth in PV installations, which have reduced demand during daylight hours and delayed rather than eliminated the peak demand period, creating the effect that the California Independent System Operator has called the ‘duck curve’. This effect is already evident in Queensland, as illustrated in Figure 7 which shows the daily load pattern on a residential feeder on the Sunshine Coast over four consecutive years as the penetration of PV on this feeder has grown.\(^{54}\)

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\(^{53}\) McArdle Hon M (2014), *Media release: $2 billion in savings to reduce power prices.*

Changes in network use resulting from growth in PV and air-conditioning have highlighted the limitations of pricing arrangements to accommodate different electricity consumption patterns.

While overall electricity demand is reducing, constraints are still experienced in some parts of the network. Storage, whether installed by the NSPs or by customers, may offer a way to reduce network augmentation costs, if it can be used to ‘trim’ peak demands in a location. For example, batteries may be a cost-effective option in providing supply to remote customers.

The adoption of more cost-reflective pricing may assist in encouraging the optimum deployment of these and other new technologies. Where augmentation of the network is required, costs are ultimately recovered from customers through regulated charges. There may be potential however, for the networks to adopt more competitive business models subject to appropriate ring-fencing to prevent cross-subsidisation from the regulated business.

**Questions**

2.12 What are the potential benefits and risks of emerging technologies for the electricity networks in terms of electricity prices and supply chain productivity?

2.13 What is the role of economic regulation of networks in the face of increasing competition from non-network services and products?

2.14 How should the costs associated with implementing new technologies be shared between the businesses and consumers?

**2.4.7 Government election commitments - network mergers**

As noted previously, one of the Queensland Government’s 2015 election commitments was to merge Powerlink, Energex and Ergon Energy into a single entity, to lower costs in the provision of network services and create additional efficiencies.\(^5\) The Government also committed to the

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combined network business having a base in Townsville. The Queensland Government has not made any announcements as to the nature of this organisational arrangement.

The IRP considered a range of structural reform options for Energex and Ergon Energy, and recommended that the Government establish a holding company over the two businesses. The then Government’s investigation of the holding company option was superseded by its broader policy agenda.

Energex and Ergon Energy have continued to progress parallel business efficiency programs in line with IRP recommendations aimed at reducing organisational costs. Since the introduction of its business efficiency programs in 2012-13, Energex has achieved annualised cost reductions of more than $140 million.  

Questions
2.15 What are the potential benefits and risks associated with structural reform of Powerlink, Energex and Ergon Energy in terms of electricity pricing and supply chain productivity?

2.5 Retail

Retailing is a competitive part of the electricity supply chain, with relatively low entry costs. Retailers provide the interface between most customers and the relatively complex wholesale market and network service providers.

Since mid-2007, all customers have been able to choose their electricity retailer, although in practice this has been limited to SEQ. The proportion of small customers in SEQ on market contracts has been reasonably steady at around 70 per cent in recent years.

While there continues to be two large retailer successors to Energex in SEQ, there are many new entrants with a variety of approaches to the market. As at 31 March 2015, there were 16 active retailers operating in Queensland, mainly in SEQ. The market share of the two incumbent retailers in SEQ, Origin Energy and AGL Energy, has been gradually eroding, but remains high at approximately 81 per cent, as illustrated in Table 2.

Table 2 Market shares at 31 December 2014 (SEQ small customers)

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<tbody>
<tr>
<td>First tier retailers (2 retailers – Origin Energy and AGL Energy)</td>
<td>84.3%</td>
<td>84.3%</td>
<td>83.6%</td>
<td>81.0%</td>
</tr>
<tr>
<td>Second tier retailers (14 retailers)</td>
<td>15.7%</td>
<td>15.7%</td>
<td>16.4%</td>
<td>19.0%</td>
</tr>
</tbody>
</table>

Source: QCA Final Determination - Regulated Retail Electricity Prices for 2015-16

2.5.1 Practical limitations on competition and price regulation

While full retail contestability has been introduced, the Queensland Government has retained a system of regulated tariffs which apply to all customers who have not elected to enter a market contract with a retailer. The competitive retail market in SEQ has evolved using the regulated tariffs set annually by the QCA as a point of reference, with most retail offers still expressed as a discount from these prices. In practice, regulated tariffs have operated as a price cap in SEQ.

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56 Raggatt T (2015), Energy Minister confirms energy corporation to be based in city, February 20.
58 Queensland Competition Authority (2015a), op. cit., page 37.
59 Ibid., page 35.
Competition in regional Queensland remains limited due to the application of the Uniform Tariff Policy (UTP). Most regional and rural customers continue to be supplied by the government-owned retailer, Ergon Energy Queensland (EEQ), under a standard retail contract reflecting regulated tariffs.

2.5.2 New retail business models

Retailers typically purchase electricity from the wholesale market, transport it via the network, provide customer services (e.g. connections, disconnections, billing), and sell it to residential and business customers under a retail contract. Retailers are free to offer a range of market contracts with different price and product structures and may bundle energy services with other inducements such as loyalty bonuses and free subscriptions.60

In recent years, a number of alternative retail models have emerged or grown, mainly driven by rising electricity prices, consumers wanting more control over their energy use, and increased access to renewable energy options. These include:61

- solar power purchase agreements – when a business sells energy generated from solar panels installed at a customer’s home or business
- pool pass-through arrangements – when the retailer sources energy from the wholesale market (similar to the typical retailing model), but the customer takes on management of the risk of wholesale market volatility; and
- customised or packaged energy sales – when retailers target customers with specific energy requirements or sell energy as part of a service package that provides customers with greater control over their energy use, for example, changing to economy or controlled load tariffs and metering.

Third party demand-side aggregators and micro-grid managers are also emerging, which will provide customers with more integrated demand-side management opportunities.

The AER also regulates on-selling — when a business buys bulk energy from a retailer and sells it to customers within an embedded distribution network, for example, caravan parks. This is a longstanding business model, and is not necessarily a response to pricing or technology drivers.

Increased availability of advanced meters for small customers, together with the uptake of energy products and services that advanced meters enable, is expected to result in a wide range of benefits for all parties across the electricity supply chain. Advanced meters can help consumers monitor, manage and adjust their electricity consumption in a way that better meets their usage and price preferences. They also provide retailers and network businesses with the opportunity to access services that support the efficient operation of the electricity system, allowing them to provide lower cost and higher quality services to consumers.62 Greater competition in metering is designed to promote innovation and lead to investment in advanced meters that deliver services valued by consumers at a price they are willing to pay.63

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60 In the Victorian market, most retailers offer sign-on bonuses, typically credited to the account, and some offer frequent flyer miles, gift cards, magazine subscriptions or free power on Saturdays in an effort to attract and retain customers. Examples of such incentives are already evident in the Queensland market. AGL offers “flybuys” points bonus at sign on and points on each bill, and membership of AGL rewards discount group. Lumo offers Velocity frequent flyer points.
63 Ibid., page i.
Questions

2.16 What are the barriers to improving consumer interest and participation in the electricity market?

2.5.3 Consumer protection and support

Changes in the retail electricity market, including potential deregulation and changes in product offerings, pricing structures and marketing approaches may be difficult for some customers to deal with, either financially or in terms of their understanding and ability to participate in the market. Retailers may also choose to focus on the most profitable offerings, leaving low-consumption or low-income customers with limited choice.

Energy affordability has been identified as a concern for many consumers. In 2013-14 the rate of electricity disconnections for failure to meet bill payments reached the highest levels for the past six years in Queensland, NSW and Tasmania.\(^64\)

Under the NERL, retailers are required to assist customers experiencing payment difficulties or financial hardship. Governments also typically provide disadvantaged groups with assistance in relation to energy costs. In Queensland, in addition to the UTP support to regional areas, the Government provides an Electricity Rebate to eligible electricity customers.

The extent to which new business models should be drawn into the NERL and NERR, particularly the energy-specific customer protection framework, is currently being investigated at the national level.\(^65\) The COAG Energy Council is through its officials considering issues around equity and access to competitive products, privacy of energy consumption data, service and product quality, off-grid arrangements and dispute resolution.

Questions

2.17 What are the costs to industry participants and risks to consumers of being regulated under either Australian Consumer Law or the National Energy Retail Law?

2.18 What issues should be considered to ensure the customer protection framework supports new business models and innovation?

2.6 Environmental policies

2.6.1 Environmental policy as a driver of electricity market and pricing outcomes

The Australian and state governments have implemented environmental policies to achieve emissions reductions, increased renewable generation and industry development. Decisions made in response to governments’ environmental policies are contributing to transformation of the electricity market, and impact pricing and productivity outcomes.

Many electricity consumers have embraced these as opportunities to respond to rising electricity prices, for example, through investments in solar PV offset by renewable energy certificate programs and feed-in tariffs. Market participants’ investment decisions are also heavily influenced by government policies, for example, the Large-scale RET and carbon pricing.


65 Advice was provided to the COAG Energy Council in July 2015 on the regulatory implications of new products and services in the electricity market. See Energy Working Group of Council of Australian Governments Energy Council (2015), New products and services in the electricity market: Advice to the COAG energy council.
2.6.2 National environmental policies

Electricity generators, and in particular coal-fired base-load generators, are among the largest sources of greenhouse gas emissions in the economy.\(^{66}\) Electricity generators represent large sunk investments in a technology that is unavoidably high in emissions and impacted negatively by any tightening of Australian Government policy on climate change and emissions controls. Policy uncertainty, as has been experienced in relation to climate change response over the last several years, creates a financial incentive for asset owners to delay investment in new plant, including those based on new and emerging technologies, and to keep older generation assets producing electricity for longer.

In this context, policy uncertainty can have long-term impacts on national greenhouse gas emissions levels and delay the economy’s transition to a low-emissions energy future.

Questions

2.19 What are the implications of uncertainty over climate change policy on productivity in the generation sector and electricity prices?

2.6.3 Solar Bonus Scheme

When introduced in 2008, the SBS was a distribution-funded scheme with the cost of the feed in tariff (FIT) incentives to be paid for by electricity consumers.

Energex and Ergon Energy were required to make FIT payments of 44 cents per KWh, based on metering data, to electricity retailers who would subsequently credit the accounts of their SBS customers. Electricity retailers were not required to share in the costs of the SBS, and did not pay for solar electricity exported to the grid by their customers. This was despite retailers being able to reduce the purchases through the NEM wholesale market that they needed to make to meet their total customer requirements. Essentially, they were receiving energy free of charge which was subsequently on-sold.

Energex and Ergon Energy recovered the costs associated with the SBS\(^ {67}\) through higher regulated network charges, which ultimately resulted in higher retail electricity prices for all customers, including those without a solar PV system. The QCA noted the inequity in this arrangement given that

\begin{quote}
... electricity customers who may not be able to afford (or who choose not to invest in) solar PV installations are forced to pay the feed-in tariff to those customers who choose to install solar panels, without receiving any benefit in return.\(^ {68}\)
\end{quote}

Participation in the SBS surpassed original expectations and Energex and Ergon Energy have incurred much higher costs than those forecast. As these costs were passed on to customers, electricity prices have risen. By 2014, the cost of the SBS was estimated to make up around 6 per cent of the electricity bill for a typical Queensland household.\(^ {69}\)

\begin{footnotesize}
\begin{itemize}
\item \(^{67}\) While the majority of the DNSPs’ costs associated with the SBS relate to FIT payments for energy exported to the grid, Energex and Ergon Energy also incur administrative and infrastructure costs arising from the connection of new solar PV customers and administration of the SBS scheme FIT payments.
\item \(^{69}\) Newman Hon C et.al. (2014), *Media release: Queenslanders to get electricity price relief*.
\end{itemize}
\end{footnotesize}
The SBS was closed to new customers on 30 June 2014. It was replaced on 1 July 2014 by a retailer-funded mandatory FIT in regional Queensland,\(^{70}\) determined annually by the QCA. The introduction of a new funding model was based on the principle that, because electricity retailers benefit financially from on-selling exported solar energy to other customers, they should make a contribution to FIT payments, essentially reflecting the wholesale market benefits they receive.

However, scheme costs associated with customers who remain eligible for the SBS will continue to be funded through network charges until 30 June 2028. Costs of the SBS currently are forecast to be around $316.4 million in 2015-16,\(^ {71}\) but these costs are likely to decline over time as participation falls, for example, due to existing customers moving premises.

### Questions

#### 2.20 What would be a better alternative for funding the Solar Bonus Scheme?

### 2.7 New technologies

New technologies are emerging across the electricity supply chain that are changing the way electricity is generated, delivered, billed and used.

Solar PV technology has been available for many years, and Queenslanders have installed PV at record levels, including in response to Australian and State government incentives. However advances in technology are making solar PV more cost-competitive as a means of generation compared to traditional generation methods. The increasing penetration of solar PV has implications for all parts of the electricity supply chain.

The Australian Government’s 2014 Energy White Paper noted that the development of cost-effective energy storage could bring about a paradigm shift in the way Australia produces, transports and consumes energy. It considered that the most profound effect will be in renewable energy, as storage can help overcome current limitations of the intermittency in generation. It also noted benefits for remote generation and networks.\(^ {72}\)

Electric vehicles (EV) are likely to become more prominent in the future as storage technology improves and costs decline. Their adoption and use will likely create an additional load on the network as the storage devices are periodically recharged, and this may result in the need for additional network investment. Well managed however, the addition of EV charging load to the electricity network could act to fill demand troughs, without adding to peak demands, and so improve the utilisation of network assets. EVs may also promote an increased uptake of PV and home storage systems as vehicle owners seek to minimise operating costs.

The Energy White Paper considered that Australia needs to better focus investment on supporting emerging energy technologies, rather than continue to provide assistance in an ad-hoc manner through a wide variety of program managers.\(^ {73}\) It highlighted the role of the Australian Government in this context.

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\(^{70}\) There is no mandated rate for customers in South East Queensland. Instead, these customers must approach their electricity retailer to obtain a market feed-in tariff rate.

\(^{71}\) Calculated from Energex and Ergon Energy’s 2015-16 Annual Pricing Proposals, approved by the AER.

\(^{72}\) Department of Industry and Science (2015), \textit{op. cit.}, page 58.

\(^{73}\) Department of Industry and Science (2015), \textit{op. cit.}, page 52.
Questions

2.21 What are the likely or potential impacts of new technology on the productivity of the electricity supply sector and its component parts, and electricity prices?

2.22 How could existing regulatory and institutional arrangements in the Queensland electricity sector support the efficient adoption of emerging technology across the electricity supply chain?

2.8 Effectiveness of Regulation and Governance

Queensland retains few direct electricity market policy levers given electricity is supplied as part of the broader NEM. We note concerns that the national regulatory and governance frameworks are failing to keep pace with the rapid transformation of Australia's electricity market, including the PC’s description of the NEM as a ‘graveyard for reform proposals’.  

2.8.1 Recent reviews of national governance and market operation

National governance in the electricity market and market operations has been reviewed frequently in recent years (summarised in Appendix B), in response to concerns about escalating electricity prices and the impact that government policy and regulatory decisions may be having on prices.

In July 2015, the Expert Panel commissioned by COAG Energy Council to undertake a review of the governance arrangements for the NEM released its interim report. The Panel identified a ‘strategic policy deficit’ in the governance of the NEM, and raised concerns that some aspects of the performance of the Energy Council, the market institutions and aspects of the ways in which they interact may be undermining policy objectives. The Panel also considered that more can be done to improve the Council’s focus on building the national characteristics of energy markets.

The COAG Energy Council has initiated a program of work to review regulatory and governance frameworks to ensure they are adequate in light of potential changes in the market as a result of consumer choices and emerging technologies. These include the Strategic Assessment of Network Regulation project (initiated in May 2014) and the New Products and Services project (initiated as part of the Energy Council’s response to the 2012 Power of Choice review).

Questions

2.23 What are the potential costs and benefits to Queensland as a result of national harmonisation of energy policy and laws in terms of electricity prices or supply chain productivity?

2.24 What are the risks and costs to customers and industry in Queensland arising from failure to harmonise regulation underpinning the NEM?

2.25 What are the key opportunities remaining for national harmonisation in regulation and governance of the NEM, and benefits from these reforms for productivity and prices?

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74 Wood T et al. (2013), Shock to the system: dealing with falling electricity demand, page 22.
2.8.2 Queensland Government regulation

We note the concerns that jurisdictional policy objectives in the energy space have the potential to undermine broader strategic policy objectives at the national level. In particular, the NEM Governance Review Expert Panel noted the potential for jurisdictions to pursue their own policy agendas in a manner which undermines the collective effort.77

The previous Government’s PowerQ Strategy (PowerQ) proposed a review of the Electricity Act, including identifying potential for further red tape reduction, which could also include exploring opportunities for greater harmonisation between Queensland and national electricity regulation.

The IDC on Electricity Reform also noted the impact that state legislation other than the Electricity Act has on efficient electricity supply, in particular laws governing planning. Other state-based legislation is also important to the efficient operation of the transforming electricity market and new market entrants and changing roles for incumbents. For example, the Electrical Safety Act will need to contemplate an increasing role for third parties in network connections and the competitive market for advanced metering.

Questions

2.26 What aspects of the Electricity Act should be considered for review in support of the longer-term provision of a more responsive and efficient electricity industry?

2.27 What aspects of other Queensland laws and regulation potentially act as barriers to improving the efficiency of electricity supply in Queensland?

2.28 What should be the focus for state regulation (Electricity Act and other legislation) to complement harmonised inter-jurisdictional energy law?


77 Ibid., p 11.

DEREGULATION IN SOUTH EAST QUEENSLAND

The Terms of Reference seeks advice on the costs and benefits of deregulation, and consideration of whether the proposed market monitoring arrangements and consumer protections (which commenced on 1 July 2015) are sufficient to allow price controls to be removed.

To assess whether the removal of retail price regulation in SEQ is warranted, and if so, whether the market monitoring and customer protection arrangements in place for price deregulation are sufficient, we will be investigating and seeking evidence on:

- the potential costs and benefits to consumers, industry and the Queensland economy of removing retail price regulation in SEQ.
- the potential costs and benefits to consumers, industry and the Queensland economy of retaining retail price regulation in SEQ.
- the state of competition in the SEQ retail electricity market and whether market conditions support the removal of retail price controls.
- whether the current regulatory framework would provide adequate support and protection for SEQ customers, particularly those who are most vulnerable, if retail prices in SEQ are deregulated.
- the appropriateness of the market monitoring and reporting arrangements proposed to accompany deregulation.
- stakeholders’ experiences of retail electricity price deregulation in other jurisdictions.
- any other arrangements that would need to be put in place should deregulation in SEQ be recommended.

3.1 Why is competition important?

Effective competition in a market should promote the long term interests of consumers by:

- driving prices towards the efficient cost of supply as retailers in a competitive market have an incentive to reduce prices to attract and retain customers, and no single retailer has the power to control prices or earn excessive profits on an enduring basis; and

- promoting customer choice by giving retailers incentives to innovate and differentiate their products and services from those of their competitors to retain existing customers and attract potential customers.

3.2 Reform in retail price regulation

All NEM jurisdictions have introduced FRC for all customers, although jurisdictions are at different stages in the development of competition in their respective retail electricity markets. Competition has led to more choice of retailers and plans in Victoria, South Australia, NSW and SEQ. Competition is yet to emerge in the ACT, Tasmania and regional Queensland however, where regulatory and tariff policy arrangements have impeded entry by new retailers. In the ACT and Tasmania, competition has also been slow to develop due to the dominance of the incumbent retailer and the small size of the market.

The next phase of reform has been to remove retail price regulation. Price regulation in some form was generally maintained as an additional protection for consumers following the introduction of FRC, on the basis that it would take time for competition to develop and for customers to see the benefits of competition in terms of price and product offerings.

It is generally considered that the principal rationales for price regulation in a market are to:

- act as a proxy for competition — the regulator sets an efficient price in the absence of effective competition in the market; and
- put a limit on the maximum price consumers may be required to pay in order to prevent abuse of market power — where there is ineffective competition, customers may not be able to switch to an alternate offer.

The AEMC considers that as competition increases, price regulation can hinder further market development. Regulated prices will always be an imperfect substitute for prices determined by effective competitive market processes, and are likely to impose costs and distortions that would not otherwise be present. Since energy businesses have better cost and market information than regulators, there is also a risk that regulated prices will either be set too low, thereby deterring market participation, investment and innovation, or too high, to the detriment of consumers. Regulators are also unable to easily assess how customers value non-price factors such as quality of service.

Questions

3.1 What are the potential costs and risks of maintaining retail price regulation in a competitive market?

3.3 Competition and retail price regulation in SEQ

3.3.1 Previous consideration of retail price deregulation in SEQ

In 2013, an Inter-departmental Committee on Electricity Sector Reform (the IDC) recommended that in order to stimulate investment and competition for the benefit of consumers in SEQ, retail price controls should be removed, providing customer protection and engagement in the market are judged to be adequate. The former Government accepted that recommendation.\(^{81}\)

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In 2014, the Electricity Act was amended to replace price regulation in SEQ with a ‘price-monitoring’ regime by 1 July 2015, subject to a number of pre-conditions being met, including:\(^{82}\)

- ensuring there is sufficient retail competition to allow consumers to benefit
- adopting harmonised consumer protections and retail standards
- implementing a consumer engagement strategy
- establishing an effective price-monitoring regime to ensure retailers are offering the best deals and services; and
- developing a suitable approach to setting prices outside SEQ that maintains support for regional consumers.

The new Government delayed enactment of the ‘price monitoring’ provisions to 1 July 2016 to provide time for a review of these arrangements.

### 3.3.2 AEMC reviews of retail competition

In its 2014 review of retail competition in the NEM, the AEMC found there was sufficient competition in the SEQ market for customers to benefit from the removal of retail price regulation, but competition was yet to emerge in regional Queensland. The AEMC’s assessment framework for this review considered the following competitive market indicators:\(^{83}\)

- the level of customer activity in the market
- barriers to retailers entering, expanding or exiting the market
- the degree of independent rivalry
- customer outcomes; and
- retailer outcomes.

In June 2015, the AEMC released its final report on the state of competition in NEM jurisdictions for 2015. The assessment framework and findings were similar to the 2014 review, with the AEMC finding that competition continues to be effective in Victoria, South Australia, NSW and SEQ, based on evidence gathered up to the first quarter of 2015.

**Figure 8  AEMC key findings for SEQ 2015\(^{84}\)**

Customers could choose from a range of energy plans from 11 different retail brands, with 25 per cent of residential and 38 per cent of small business customers actively investigating energy options in the last 12 months. Many customers can save by shopping around, with some flat rate market offers up to $250 per annum cheaper than the most expensive, however there is low customer awareness of independent price comparator websites. 62 per cent of customers surveyed were satisfied with their electricity retailer, though satisfaction levels were slightly lower than in Victoria, NSW and South Australia.

The AEMC concluded that while competition in SEQ appears to be less intense than in earlier years and in some other jurisdictions, the removal of price regulation can be expected to promote further competition in the market to deliver innovation, greater choice and competitive prices in SEQ.

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However, for consumers to benefit from competition, and indeed deregulation, they will need to engage with the market and compare offers in order to find the best deal for them. The need to increase customer awareness of the choices available and ensure consumers, particularly those who are most vulnerable, have the necessary information and tools to understand and compare offers, is discussed in more detail in section 3.5.

Questions

3.2 What are the potential costs of deregulation? How should they be assessed?
3.3 What risks might consumers face in a deregulated SEQ market, and how might these risks be mitigated?
3.4 Is the AEMC’s approach to assessing retail competition in the NEM appropriate, or are there other factors that should be considered?

3.3.3 Price deregulation in other jurisdictions

The AEMC has found that competition has led to a greater choice of retailers and plans in Victoria, South Australia and NSW. However, there is room to further promote competition and improve customer outcomes across all jurisdictions. To this end, the AEMC recommends that jurisdictions:

- consider options for raising awareness of the tools available to simplify comparing energy offers to improve customer confidence in the market
- consider tailored communications to different audiences as set out in the AEMC’s consumer engagement blueprint
- ensure concession schemes are delivering on their intended purpose in an efficient and targeted way
- continue to harmonise regulatory arrangements to reduce the long term costs of competing across jurisdictions
- implement the recommendations of the AEMC’s review of electricity customer switching to improve the accuracy and timeliness of the customer transfer process; and
- remove energy retail price regulation where competition is effective.

A summary of the current status of retail electricity competition in those jurisdictions where retail price controls have been removed is outlined in Table 3 below.

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86 Ibid., pages i-ii.
Table 3  Summary of price deregulation in other states

<table>
<thead>
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<th>State</th>
<th>Experience</th>
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| Victoria    | AEMC analysis showed Victoria had the highest proportion of customers switching to second tier retailers and the lowest level of market concentration in the NEM. Victorian customers were also found to have the highest levels of awareness of choices and confidence to choose the right energy option. Analysis also showed that a representative customer comparing flat rate market offers could find an offer that is as much as $570 a year cheaper than the most expensive. 87 The AEMC found that 67 per cent of Victorians surveyed were satisfied with their retailer overall, as well as the value for money and customer service provided. 88 This differs from consumer surveys commissioned by the Victorian Essential Services Commission (ESC) in 2013 that found consumers were dissatisfied with many aspects of the retail market. 89 The AEMC's 2013 Residential Electricity Price Trends Review indicated gross retailer margins in February and September 2013 appeared to be higher in Victoria than in other jurisdictions. However, the AEMC concluded it was unclear whether this was due to wholesale energy costs being underestimated or Victorian retailers having higher operational costs potentially as a result of administering customer protection schemes. 90 The AEMC cautioned against drawing any conclusions about estimates of gross retailer margins on the basis that margins are expected to fluctuate over time and are prone to error. It also considered that periods of temporarily elevated margins may not necessarily be detrimental to competition as it can stimulate new entry and give customers incentives to seek out lower-price suppliers and/or to reduce consumption. 91 South Australia The AEMC found there has been a small decline in market concentration as new entrant retailers gain market share from the largest three retailers. However, while most customers were satisfied with their level of market choice, value for money and customer service, a small proportion of customers have had negative experiences and were dissatisfied with their retailer. AEMC analysis shows that a representative customer comparing flat rate market offers could find an offer that is as much as $400 a year cheaper than the most expensive. 92 NSW The AEMC found new retailers had entered the NSW market since deregulation on 1 July 2014 and higher customer switching rates have been observed. 74 per cent were satisfied with their retailer. A representative customer comparing flat rate market offers could find an offer that is as much as $720 a year cheaper than the most expensive. 93 The AEMC noted however that the full impact of deregulation were likely to become more evident over the long term as it would take time for retailers and customers to respond to new opportunities. IPART found competition for residential and small business customers in NSW was working effectively, and a detailed review of retail prices or profit margins was not necessary. 94 IPART's draft report showed four new retailers have entered the NSW market in the past 12 months, with the removal of retail price regulation cited as a major reason for this. IPART considered there were opportunities to make the NSW market work better for customers and there continued to be a low level of awareness of independent price comparison websites like the AER’s EnergyMadeEasy.

Questions

3.5  What are the lessons to be learned from deregulation in other jurisdictions that could be applied to the SEQ market?

87 The level of potential savings differs with distribution network, energy consumption, discount eligibility and type of contract.
91 Ibid., page 146.
92 The level of potential savings differs with energy consumption, discount eligibility and type of contract.
93 The level of potential savings differs with distribution network, energy consumption, discount eligibility and type of contract.
3.4 Price deregulation in SEQ

3.4.1 Legislative framework

In September 2014, the Queensland Parliament passed the Electricity Competition and Protection Legislation Amendment Act 2014 (ECPLA Act) and the National Energy Retail Law (Queensland) Act 2014 (NERLQ Act).

The objective of the NERLQ Act was to commence the National Energy Retail Law (NERL) and apply the National Energy Customer Framework (NECF) in Queensland, as well as to introduce appropriate measures to account for Queensland’s specific circumstances.

The objective of the ECPLA Act was to amend the Electricity Act to replace retail price regulation in SEQ with a market monitoring regime, and make consequential amendments to Queensland energy legislation to avoid duplication upon commencement of the NERLQ Act.

The legislation was underpinned by a market monitoring and customer protection regime that was intended to increase competition for the benefit of consumers, reduce the regulatory burden on retailers, and provide an appropriate level of customer protection and support.1

Both Acts were scheduled to commence on 1 July 2015. However, the Queensland Government announced on 28 April 2015 that the removal of price controls in SEQ would be placed on hold for 12 months to allow the QPC time to conduct a public inquiry into electricity prices.97 Commencement of the provisions in the ECPLA Act relating to price deregulation was deferred until 1 July 2016.98 The NERLQ Act and the remaining provisions of the ECPLA Act commenced on 1 July 2015. This means that if no further action is taken by government, the deferred provisions of the ECPLA Act, and hence price deregulation, will commence in SEQ on 1 July 2016.

The amendments to the Electricity Act to facilitate price deregulation are contained in sections 44, 45 and 50 of the ECPLA Act. These amendments were designed to:

- remove retail price regulation in SEQ99 — The Minister responsible for Energy (the Minister) would no longer have the power to decide the regulated retail electricity prices, or the methodology for fixing the prices, that a retailer may charge standard contract customers within the ‘Energex distribution area’ (i.e. SEQ). Rather, electricity prices would be set by market competition and retailers would be required to publish a ‘standing offer’ which represents what customers would be charged if they do not negotiate an alternative market contract
- establish a market monitoring and reporting framework100 — The Minister would have the power to direct the QCA to monitor the operation of the SEQ retail electricity market and publish an annual market comparison report; and

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95 The NECF is a set of national laws, rules and regulations governing the sale and supply of energy (electricity and reticulated natural gas) to consumers. It was developed under cooperative arrangements between the Australian Government and all states and territories, and works by each participating jurisdiction applying the framework as a law of its jurisdiction.
97 Pitt Hon C (2015), Media release: Deregulation deferred as Productivity Commission conducts power price probe.
98 The Electricity Competition and Protection Legislation Amendment (Postponement) Regulation 2015 (SL 2015 No.33) extends the pre-commencement period for the ECPLA Act to the end of 30 June 2016. The effect of the postponement regulation is that any deferred provisions of the ECPLA Act will commence on 1 July 2016. The proclamation for the ECPLA Act (SL 2015 No.32) lists the specific provisions that have been deferred.
99 Electricity Competition and Protection Legislation Amendment Act 2014 (Queensland), section 44.
100 Ibid., section 45.
• *provide a limited reserve pricing power*\(^{101}\) — Should market settings in SEQ prove ineffective and competition deteriorate, the Minister would have the power to reintroduce price controls, subject to an independent review of the market.

The removal of retail price regulation in SEQ would not alter the Minister’s power under section 90 of the Electricity Act to decide, or delegate responsibility to the QCA to decide, the regulated prices that a retailer can charge standard retail contract customers outside SEQ.

### 3.4.2 Market monitoring and reporting

The ECPLA Act provides for the Queensland Government to monitor the retail electricity market in SEQ to ensure competition remains effective.\(^{102}\) Such monitoring mechanisms were also intended to inform the Government on the need to investigate the effectiveness of competition in the market.

The legislation allows the Minister to direct the QCA to publish an annual market comparison report and report on any other information. The legislation also allows for the Minister to tailor the QCA’s reporting requirements to meet the information needs of consumers, industry and government, and to request an independent investigation into the state of competition in the SEQ market at any time.\(^{103}\) Reports from the QCA would be complemented by market monitoring reports from the AER and AEMC, as outlined below.

From 1 July 2015, the AER commenced monitoring and reporting on the Queensland retail electricity market following the introduction of the NERL in Queensland. The AER is responsible for publishing an annual retail market performance report covering a range of non-pricing indicators, including:

- number of retailers actively selling to energy customers
- number of customers on standard retail contracts and market retail contracts
- information on customer service and customer complaints; and
- a report on energy affordability for small customers.

It is anticipated the AEMC will continue to undertake an annual review of the state of competition in NEM jurisdictions, in accordance with the standing terms of reference provided by the COAG Energy Council.\(^{104}\) The AEMC’s assessment framework is outlined in section 3.3.2 of this issues paper. The AEMC also publishes an annual electricity price trends report which provides information on the drivers of potential future movements in prices.\(^{105}\)

Other jurisdictions have also implemented market and price monitoring arrangements in association with price deregulation, as summarised in Table 4.

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\(^{101}\) *Ibid.*, section 50.


\(^{103}\) *Electricity Competition and Protection Legislation Amendment Bill 2015, Explanatory Notes page 17*.

\(^{104}\) The terms of reference can be accessed via the AEMC’s website: www.aemc.gov.au.

\(^{105}\) The 2014 *AEMC Residential Electricity Price Trends* report can be accessed via the AEMC’s website: www.aemc.gov.au.
Table 4  Summary of price deregulation in other jurisdictions

<table>
<thead>
<tr>
<th>Victoria</th>
<th>New South Wales</th>
<th>Ireland</th>
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<tr>
<td>Since price deregulation commenced in Victoria in 2009, the ESC has produced an annual energy retail performance report, with details of switching rates, market shares, prices of standing and market offers, and some customer service indicators (disconnections, hardship policies, call centre performance).</td>
<td>Since 1 July 2014, IPART has been required to monitor and report annually on the performance and competitiveness of the retail electricity market in NSW. IPART reports on various aspects of the market, including customer participation, electricity prices in regional areas, whether price movements and price and product diversity are consistent with a competitive market, and whether there is a need for a detailed review of retail prices and profit margins</td>
<td>The Commission for Energy Regulation (CER) in Ireland issues an annual market monitoring report. If the report indicates the market is at risk of anti-competitive behaviour, the CER will consider appropriate remedies, including the reintroduction of price caps if appropriate.</td>
</tr>
</tbody>
</table>

Questions

3.6 In the event retail prices in SEQ were deregulated, are the market monitoring and reporting arrangements adequate, or are there changes or improvements that could be made?

3.4.3 Customer protection and support

The NECF governs the sale and supply of electricity and natural gas to retail customers and operates with the Australian Consumer Law to protect small energy customers in their electricity and gas supply arrangements. It commenced in Queensland on 1 July 2015.

The majority of the customer protection arrangements in the NERLQ Act apply to all Queensland energy consumers. Some variations were introduced however to provide support for customers in SEQ if retail price controls are removed.\(^{106}\)

Broadly, the new arrangements support competition and consumer choice by placing a regulatory obligation on all retailers to:

- Provide at least 10 business days advance notice of any price increases
- Provide between 40 and 120 business days advance warning about the expiry of fixed term benefits, for customers on market contracts
- Offer at least one market contract with no exit (early termination) fee, and to cap all other market contract exit fees at $20

From 1 July 2015, Queensland customers can now also access the AER’s *EnergyMadeEasy* price comparator website, phone line and translation services to assist in comparing offers.

Additional support has also been provided for vulnerable and disadvantaged consumers by:

- placing an obligation on retailers to operate programs to help small customers experiencing financial difficulty due to hardship, to manage their energy costs on an ongoing basis

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• establishing a comprehensive ‘exempt seller’ framework that gives small customers in on-supply situations, such as multi-tenanted residential complexes and caravan parks, broadly equivalent protections to other customers— including increased access to concessions; and

• placing an obligation on all retailers to provide customers with information on flexible payment options when they enter a contract, and information on government concessions and rebates when issuing disconnection warning notices.

To further assist customers in the event that retail prices in SEQ are deregulated, the following transitional arrangements were proposed.\textsuperscript{107}

• for the first year of deregulation, retailers would not be permitted to vary their standing offer prices for consumers on standard retail contracts, unless the variation is to reduce the price. The purpose of this provision is to limit price fluctuations by ensuring that once standing offer prices are set, they will remain stable for the first year of deregulation; and

• for the first two years of deregulation, retailers would not be permitted to include any new types of fees or charges in their standing offer prices that were not included in the regulatory price determination for the financial year immediately preceding deregulation.

3.4.4 Statutory reserve pricing power

Section 50 of the ECPLA Act provides for a reserve pricing power, as an additional safeguard for consumers in the event that competition becomes ineffective.\textsuperscript{108}

This is consistent with the AEMC’s recommendation for NSW that due to uncertainty about how the NSW retail electricity market would develop following price deregulation, the ability to reintroduce retail price regulation should be retained.\textsuperscript{109} The key objective of a reserve pricing power is to safeguard the long-term interests of consumers by allowing the Government to identify and respond to any deterioration of competition and re-emergence of market power.

To minimise potential regulatory uncertainty for industry, the operation of Queensland’s reserve pricing power would be subject to strict criteria.\textsuperscript{110} The reserve power may only be exercised subject to an independent review body, such as the QCA, finding that competition in SEQ is no longer effective and recommending the reintroduction of retail price regulation.

Questions

3.7 In the event retail prices in SEQ were deregulated, would the customer protection arrangements provide adequate support and protection for SEQ consumers, particularly those who are most vulnerable?

3.8 Are there any additional protections required, and what is the evidence that these would improve consumer outcomes?


\textsuperscript{108} Queensland Parliament (2014), \textit{op. cit.}, page 3140.


\textsuperscript{110} Queensland Parliament (2014), \textit{op. cit.}, page 3140.
### 3.5 Additional support to increase consumer engagement

The issue of consumer behaviour in the face of a changing electricity sector is discussed in greater detail in Chapter 5, and in particular how to support customers to maximise value from the market and ensure appropriate protections are in place for vulnerable consumers.

The previous government identified the implementation of a consumer engagement strategy as a pre-condition for introducing price deregulation in SEQ. Improving consumer engagement was listed as a key action in PowerQ, to help consumers become more active and successful in seeking out suppliers and products that best meet their needs.111

Stakeholder feedback in anticipation of price deregulation commencing on 1 July 2015 indicated reservations about consumer readiness to engage with the market. Similar concerns also have been raised in the context of the network businesses tariff consultations, including that more cost-reflective tariffs would greatly increase complexity for consumers who have low levels of knowledge and understanding of the factors influencing their energy consumption and demand, and electricity bills.112

Research undertaken by the AEMC indicates that, while the majority of SEQ customers are aware they can choose between multiple retailers and plans, there is a low level of awareness of the availability of independent price comparator websites, such as the AER’s EnergyMadeEasy, that can help customers find a suitable energy plan.113 The AEMC considers greater promotion of EnergyMadeEasy could help improve customer confidence in the market.

Some groups of customers have additional challenges in accessing information and assessing their options. This is particularly the case for customers who do not have the confidence or the technology to access online resources.114

The AEMC also concluded that a government information and education campaign could be implemented to help encourage customers to shop around regularly, inform them of their rights and address common misconceptions that may be a barrier to their switching between retailers.115 In 2013, the AEMC, in collaboration with consumer groups, energy retailers and communication and research experts, developed a consumer engagement blueprint to empower consumers in NSW and make it easier for them to compare offers.116

#### Questions

3.9 In what ways could the tools, information and support available to assist residential and small business customers in SEQ to participate in the retail electricity market be improved better targeted?

3.10 What is the role for government, retailers and consumer groups in promoting greater customer participation should retail electricity price deregulation in SEQ eventuate?

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116 The blueprint was based on research conducted in NSW and can be accessed at http://www.aemc.gov.au/getattachment/7356b545-1216-412b-a9e6-6cf17776a518/Brochure.aspx
4 REGIONAL QUEENSLAND

The Terms of Reference seeks advice and recommendations on increasing competition in regional Queensland while maintaining the Uniform Tariff Policy (UTP), as well as considering farming and irrigation. The Terms of Reference also seeks advice on opportunities for local government to have direct involvement in the supply of electricity through community-based solutions.

4.1 Increasing competition in regional Queensland

In order to provide advice on options to increase competition in regional Queensland while maintaining the UTP, we will be investigating and seeking evidence on:

- the overarching objective(s) of regional pricing and the UTP.
- the potential benefits and costs of competition for regional Queensland.
- the existing regulatory and non-regulatory barriers to competition in regional Queensland.
- factors that should be considered when delivering the UTP, particularly if retail price deregulation is introduced in SEQ in the future.
- potential options for increasing competition in regional Queensland while maintaining the UTP, and the impacts on consumers, industry and the Queensland economy.

4.1.1 What is the UTP and the role of the Community Service Obligation (CSO)?

The UTP ensures that regardless of where they live in Queensland, eligible standard retail contract customers of the same class should have access to the same retail tariffs for their electricity supply.\(^{117}\)

Uniform tariff policies generally tend to be implemented on social equity or fairness grounds. There is a view that access to essential services, such as electricity, should be available at the same prices regardless of location.\(^{118}\) The UTP in Queensland is also believed to have had a regional development policy objective.\(^{119}\)

For much of rural and regional Queensland, the cost of supplying electricity is greater than in the more densely populated south east. Paying the full costs of supply would impact regional customers and potentially the economies of those regional communities.

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\(^{118}\) Queensland Competition Authority (2013a), *Statement of regulatory pricing principles*, page 25.

According to the QCA, a typical residential customer (consuming 4,053 kWh per year on the standard light and power tariff, Tariff 11) and paying cost-reflective prices in 2014–15 would pay at least 30 per cent more if they lived in regional Queensland, instead of SEQ. Customers in western areas of the state or in isolated communities would pay at least 140 per cent more. These cost differences are mainly due to the higher costs of network services in the more dispersed parts of the State. The higher costs in the isolated communities are due to the high costs of diesel fuel used in their power stations.

The UTP is delivered in most of regional Queensland through the government-owned retailer, EEQ. EEQ is constrained from offering market contracts and must therefore provide electricity at the regulated Notified Prices. As these prices are lower than its actual costs of supply (it must pay the true regulated network prices approved by the AER, rather than the lower network costs assumed in formulating the Notified Prices), the Government provides EEQ with an offsetting CSO payment. This CSO payment is determined to offset the causes of the supply cost differences—essentially differences in network charges and the costs associated with energy losses in the networks; and differences in energy generation costs for customers in the isolated communities.

Electricity-related CSO payments for EEQ customers are estimated to cost $432 million in 2015–16. As Figure 9 highlights, the CSO costs for government are volatile, and are expected to grow over the forward estimates period. The Commission of Audit noted that the funding arrangements for the UTP give rise to an increasing and somewhat unpredictable requirement for subsidisation of energy costs by taxpayers.

Figure 9  Actual and forecast Uniform Tariff CSO 1998-99 to 2018-19 ($ million)

Source: Department of Energy and Water Supply

The UTP also applies to customers in the Goondiwindi, Texas and Inglewood areas of southern Queensland who are connected to Essential Energy’s NSW distribution network. While Queensland’s regulated prices do not apply to these customers, the Government provides a payment to local default retailer, Origin Energy, to ensure these customers pay no more for electricity than other similar customers in Queensland.

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120 Queensland Competition Authority (2015a), op. cit., page 5.
121 Queensland Treasury (2015), op. cit., page 130.
Queensland’s UTP arrangement is not common in Australian jurisdictions that have more than one distribution network. South Australia and Western Australia having comparable uniform electricity pricing in regional areas as described in Table 5.

<table>
<thead>
<tr>
<th>State</th>
<th>Tariff policy</th>
<th>Funding arrangements</th>
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<tr>
<td>South Australia</td>
<td>The SA government requires SA Power Networks to maintain state-wide pricing for small customers, effectively averaging distribution tariffs across the State. SA also has a country equalisation scheme which requires retailers to offer rural customers prices no more than 1.7 per cent higher than those for Adelaide consumers. This is supported in part by a SA derogation from the NER which specifies common customer connection point loss factors throughout the State.</td>
<td>Using average distribution tariffs across SA means an effective cross-subsidy, with those customers with higher costs being subsidised by those customers who would otherwise have lower electricity prices.</td>
</tr>
<tr>
<td>Western Australia</td>
<td>WA has a UTP which means that small use Synergy and Horizon Power customers are all charged the same rate. This includes customers in remote regions, where the costs to supply electricity are considerably higher.</td>
<td>The extra costs of supplying electricity to these areas are funded by i) network charges in the South West Interconnected System (SWIS) – a cross-subsidy; and ii) a WA Government subsidy.</td>
</tr>
</tbody>
</table>

Rural and regional customers in Victoria and NSW pay more for electricity than customers in urban areas. Other jurisdictions have only one network.

Queensland is the only state in the NEM to allow large business customers using more than 100 MWh to access to uniform retail tariffs.

**Questions**

4.1 What objective(s) should the UTP be designed to achieve and how effective is the current UTP at achieving the objective(s)?

4.2 Could the UTP be targeted more effectively to better achieve these objectives?

4.3 Can stakeholders point to examples of how the UTP has delivered benefits to their region in terms of economic growth and development?

4.1.2 Why has competition been slow to develop in regional Queensland?

Less than one per cent of small customers in regional Queensland are supplied under a market contract, while the proportion of regional large business customers on market contracts is at around 27 per cent.

The QCA considered the principal barrier to competition in regional Queensland lay in the structure of the subsidies paid by the Queensland Government to EEQ to fund the UTP. The CSO is calculated to reflect the additional costs of supplying electricity in regional Queensland compared to SEQ (for small customers) and coastal Central Queensland (for large customers).

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The CSO is paid directly to EEQ. Other retailers cannot compete because without similar direct government support they would make a loss in supplying most customers, even at the Notified Prices charged by EEQ. Subsidising the cost of network electricity supply in this manner may also reduce the competitiveness of non-network solutions, such as PV and battery storage.

The QCA also identified a number of other potential barriers to competition in regional Queensland, including:

- the inability of both small and large customers to return to EEQ after switching to another retailer (commonly known as the 'non-reversion policy'), which could potentially limit customer choice in a competitive market;
- the lack of customer engagement in the market which could limit the future development of competition; and
- customers located in isolated communities (who are not connected to the national electricity grid) are currently excluded by legislation from choosing their retailer.

Questions

4.4 What should retail electricity competition in regional Queensland be designed to achieve, and how can this be delivered in an environment of subsidised electricity prices?

4.5 To the extent they are incompatible, which of subsidy or competition is the more important objective and why?

4.6 How important are the barriers listed above and how should they be addressed?

4.7 What are the material barriers to competition in regional Queensland, and how should these barriers be addressed?

4.8 What evidence is there of the characteristics of competition beginning to develop in regional Queensland?

4.1.3 Options for increasing competition in regional Queensland

In May 2013, the IDC made recommendations about reform to the electricity sector in regional Queensland, including:

- addressing barriers to the growth of retail competition in regional Queensland, including moving towards a network-based subsidy; and
- reviewing the UTP arrangements to develop more efficient subsidy arrangements for regional Queensland, including whether there is scope to better target the subsidy.

In October 2013, the QCA was directed to investigate and report on matters relating to the UTP and retail price regulation in regional Queensland. The QCA identified two broad options for the future delivery of CSO subsidies that would work to increase competition in regional Queensland while maintaining a UTP, namely:

- the current retail-based subsidy could be expanded and made available to all retailers; or
- the subsidy could be paid at the network level to Ergon Energy's network business EECL, rather than at the retail level to EEQ.  

Both options would mean that all retailers would be able to offer competitive retail prices based on the same subsidy, allowing them to compete for customers profitably. However, expanding

126 Ibid., pages 17, 32-35.
127 Ibid., page 14.
the retail-based subsidy to all retailers would be more administratively complex and costly than a network-based subsidy paid to the one distributor. Submissions to the QCA generally supported moving to a network-based subsidy in order to facilitate retail competition.128

The Terms of Reference ask us to consider options for increasing regional competition, while maintaining the UTP. We must also have regard to the state’s finances.

We understand that some of the profits from EEQ are used to offset the cost to Government of delivering the CSO, and that these offsets would be lost in a competitive retail market environment, effectively increasing the cost of the CSO. The details of these arrangements are contained in an agreement between the Queensland Government and EEQ which sets out the rules for determining the CSO to EEQ.

The issue we need to consider is whether the benefits from introducing regional competition outweigh the increased costs of the CSO for taxpayers generally.

An alternative to a CSO-based subsidy could be to transition all regional customers to cost-reflective retail tariffs based on Ergon Energy’s network costs, potentially over time, and to provide direct transfer payments to those customers identified as being in need of support. The QCA has noted that careful consideration would need to be given to the eligibility criteria to ensure that subsidies go to the intended recipients, and that savings made under this option would also need to be weighed against potentially higher administration costs.129 We note there was some stakeholder support for this option in submissions to the QCA, at least in the longer term. This was on the basis that cost-reflective pricing and targeted assistance measures would ensure social welfare outcomes are met (i.e. those customers most in need of support receive it) and the inefficiencies associated with non-cost-reflective pricing are avoided.130

### Questions

4.9 What are the potential benefits and costs of competition in regional Queensland?

4.10 Why would a network-based CSO be the most effective way of supporting the UTP and promoting competition in regional Queensland?

4.11 Are there any other options that would increase competition in regional Queensland and maintain a UTP, or deliver the same objectives as a UTP?

### 4.1.4 Role of EEQ in a competitive market

Consideration would need to be given to EEQ’s role in a competitive market, including its ability to compete and whether it has any unfair advantages over other retailers.

The IDC recommended that any move to increase competition in regional Queensland should be accompanied by structural reform of EEQ to allow it to compete against other retailers.131 EEQ has been restricted from competing for retail customers since 2007. While having some infrastructure in place (i.e. customer information/billing system), EEQ may have limited capacity to compete effectively on a large scale without further investment in systems and capabilities.

EEQ’s relationship with the Ergon Energy network business is also a consideration. Separation of monopoly and competitive market functions was a key feature in structural reform of the Queensland industry prior to joining the NEM. While the retail and network businesses are ring-

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128 Ibid.
129 Ibid., page 29.
130 For instance, ESAA, Ergon Energy, Stanwell and Origin Energy.
131 Interdepartmental Committee on Electricity Sector reform (2013), op. cit., page 106.
fenced, further separation might increase confidence in the marketplace that EEQ is operating on a competitively neutral basis. The IRP noted the lack of regulatory or contractual constraints on Ergon Energy’s network charges to EEQ, and that the CSO arrangements do not create incentives on either entity to minimise costs.  

The Queensland Commission of Audit noted that the legislative prohibition on EEQ competing has the potential to erode the value of the retail entity and its retail portfolio, as well as reduce direct incentives for costs reductions in the absence of profit motivations. The IDC also pointed out that introducing a network-based CSO subsidy while EEQ is precluded from competing would put the value of the company at risk through an immediate loss of higher-value customers.

### Questions

4.12 What issues would need to be addressed to allow EEQ to compete effectively, and on an even footing?

4.13 What kind of timeframe is a transition to a competitive market, including for EEQ, likely to require?

### 4.1.5 Options for setting notified prices while maintaining a UTP

Currently, Notified Prices for residential and small business customers are based on the costs of supply in SEQ. Notified Prices for large customers are based on the costs of supply in regional Queensland, including a network component that reflects the lowest of Ergon Energy’s network charges.

In its 2014 review of retail price regulation in regional Queensland, the QCA identified three potential cost benchmarks that would align with a network-based CSO subsidy and allow the UTP to continue, particularly if price deregulation for SEQ proceeds and Notified Prices are no longer in place for SEQ. Essentially, regulated prices could be based on:

- the lowest cost of supplying NEM connected customers in Queensland (i.e. SEQ costs, noting these would be difficult to calculate should Notified Prices be removed for this region)

- the average cost of supplying NEM connected customers in Queensland; or

- the lowest cost of supplying NEM connected customers in regional Queensland (i.e. Ergon Energy’s east pricing zone, transmission region one).

The QCA considered that for a network-based subsidy to be feasible and to encourage more efficient use of the network, Ergon Energy’s network charges and tariff structures should form the basis of regulated prices in regional Queensland, even if the subsidised network prices were required to align with Energex price levels (i.e. to result in the same customer costs, on average) to mitigate customer impacts.

Continuing to base regulated prices on SEQ costs and the SEQ network pricing structure means customers face more Brisbane-based network pricing signals relevant to their area and may encourage inefficient investment and consumption.

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133 Costello Hon P et al. (2013), op. cit., page 68.
134 Queensland Competition Authority (2014b), op. cit., page 19.
135 Ergon Energy has three network pricing zones (East, West and Mt Isa) with the lowest network costs being in transmission region one in the east pricing zone.
Questions

4.14 What is the most efficient approach to setting Notified Prices in regional Queensland that will support a UTP and why?

4.15 What are the benefits and impacts of using Ergon Energy's network charges and tariff structures to form the basis of regulated prices in regional Queensland?

4.2 Farming and irrigation and other rural/regional industries

Electricity is a key input to the agricultural sector, which uses large amounts of energy for heating and cooling or distributing water on irrigated properties. There are also key periods (e.g. irrigation season) when agricultural consumers require greater amounts of electricity.

The Queensland Farmers’ Federation says farm businesses are facing challenges and need lower electricity costs, transparency in the electricity market and tariffs that are tailored to suit the needs of agricultural industries. In response to farmers’ concerns about electricity costs, the Queensland Government and Ergon Energy have initiated projects with the industry to improve the use of electricity in the sector, in particular through increasing the efficiency of energy use.

4.2.1 Retail price regulation

Many non-market business customers in Queensland are currently supplied under ‘transitional tariffs’. These have been developed by the QCA to move these customers gradually from historical tariffs (Tariffs 62, 65 and 66) initially established for farming and irrigation purposes, which were well below the true cost of supply to cost-reflective tariffs.

The transitional tariffs are not based on a cost-reflective build-up of the costs of supplying electricity, such as the generation, network, retail and environmental policy costs which underpin tariffs for other customers. Rather they are set to provide a steady progression from the current price levels to cost-reflective prices.

The QCA is gradually adjusting these transitional tariffs to achieve cost-reflective levels by 1 July 2020, at which time they will be phased out, with relevant customers then shifting to general business tariffs. The 2020 timeframe is intended to allow these businesses to recoup some of the value of investments made on the basis of the level and structure of the historical tariffs, and to prepare for the standard business tariffs.

In recent years, some stakeholders have been advocating for changes to farming and irrigation tariffs. Canegrowers has proposed reducing irrigation tariffs by one-third, arguing that reduced electricity prices would lead to much higher demand from irrigators, offsetting the loss in revenue for Ergon Energy from the price reduction. However, the QCA considers Canegrowers’ proposals to reduce irrigation tariffs would effectively increase the cost to Queensland taxpayers of providing subsidised electricity to the 18,000 customers on irrigation tariffs, regardless of any changes in demand.

Following the commencement of the new five-year regulatory period for Ergon Energy and Energex on 1 July 2015, standard regulated business tariffs fell in 2015-16. Recognising this, the

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136 Queensland Farmers’ Federation (2015), Submission to the Queensland Competition Authority draft determination on regulated retail electricity prices for 2015-16.

137 These tariffs are being transitioned over a period of several years because many customers would face price impacts if they were required to move immediately to a standard business tariff. See Queensland Competition Authority (2015a), op. cit., page 44.


139 Queensland Competition Authority (2014c), Factsheet: Canegrowers’ proposal for lower irrigation tariffs, page 1.
QCA decided not to escalate transitional tariffs, but maintain them at their 2014-15 levels, so the difference between transitional and standard tariffs will still continue to close. This reduction in the difference between the standard business and transitional tariffs, combined with different consumption patterns amongst farmers and irrigators, means some of these customers would already benefit from moving to a standard business tariff (e.g. Tariff 20). The gradual transition also means more transitional customers will be better off on standard tariffs each year out to 2020.

However, some transitional customers will still face a jump in electricity bills in 2020. Customers on transitional tariffs designed for small customers — such as farming and irrigation Tariffs 62 and 65 — who use more than 100MWh of electricity per year, would need to switch to cost-reflective general business tariffs for large customers. These large customer tariffs have much higher fixed charges, plus the addition of demand charges, but lower consumption charges. Bill impacts will depend on customers' levels of demand, and whether or not the lower consumption charges offset the higher fixed charges.

### Questions

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<tr>
<th>Q.</th>
<th>What percentage of input costs do electricity prices represent for different types of customers on transitional tariffs, and how do total input costs compare with revenues?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q.</td>
<td>What approaches should be considered to help customers on transitional tariffs?</td>
</tr>
</tbody>
</table>

#### 4.2.2 Energy efficiency

Improving on-farm operational efficiency can result in cost savings for agricultural businesses, particularly irrigators.

In 2013, the Queensland Department of Agriculture, Forestry and Fisheries provided over $700,000 to Ergon Energy to conduct a number of on-farm energy efficiency audits for irrigation installations under the Irrigation Energy Savers program. The energy audit program was intended to identify, undertake financial analysis of and demonstrate opportunities to improve operational efficiencies, with results provided to the irrigation sector.

Preliminary findings suggest significant operational efficiencies and consequential savings can be realised. Audit results from Irrigation Energy Savers have pointed to energy savings of 30 per cent being achievable. Energy auditors also identified other on-farm energy saving opportunities that were not being targeted under the irrigation program, including by improving the energy use efficiency of lighting, heating, cooling, pumps and processing equipment and technologies such as power factor correction, biodigestors, variable speed drives and solar PV.

In December 2014, a further $2.69 million was approved for the Energy Savers Plus Program. The program is being delivered by Ergon Energy in collaboration with the Queensland Farmers Federation. Twelve agricultural sectors are engaged in the program with over 100 comprehensive on-farm energy audits being planned.

Initial results from Energy Savers Plus have shown paybacks on implementation costs usually within three years.

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140 Queensland Competition Authority (2015a), op. cit., pages 46-47.
With the introduction of demand tariffs, some of these customers may be able to achieve additional savings through more active management of their energy use, in particular their maximum demand.

**Questions**

4.18 What are stakeholders’ views on the effectiveness of energy efficiency and demand management measures in helping alleviate electricity bills for customers on transitional or obsolete tariffs, and are there other options that should be considered?

### 4.3 Role of local government

The Terms of Reference asks us to consider the opportunities for local governments to have direct involvement in the supply of electricity through community-based solutions.

#### 4.3.1 Localised interests in electricity supply

Although Queensland's electricity network comprises hundreds of thousands of kilometres transmission and distribution lines, electricity supply still has a strongly localised characteristic. Reliable and cost-effective electricity supply is often identified by local communities as critical to economic and regional development. Constraints in parts of the network can also require localised remedies, including demand response, embedded generation and energy storage.\(^{143}\)

There are also 35 physically isolated supply systems in regional and rural Queensland (including Mt Isa-Cloncurry and Napranum), which involve the operation and maintenance of small-scale generators and local electricity networks. The power stations range from 165kW to 9.55MW installed capacity, with the smaller power stations being remotely controlled, generally with a part-time local attendant who undertakes minor maintenance and operational duties.

The IRP identified the following alternative service delivery options for Ergon Energy’s smaller local depots and its isolated networks depots that might be more cost-effective, deliver better services and better support regional economic objectives:\(^{144}\)

- operating some local depots under Local Service Agent Models where there is broad support amongst staff for this type of private sector service delivery model
- calling for expressions of interest from the private sector to operate and maintain the isolated supply assets as an independent power producer; and
- putting in place an explicit and transparent contractual or regulatory arrangement to ensure isolated systems are built, maintained and operated efficiently and cost effectively, to standards agreed by the Government as the provider of the CSO.

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\(^{144}\) Bellas, T et.al. (2013), *op. cit.*, pages 62-7.
Questions

4.19 In what ways could the existing arrangements for supplying local communities be more effective?

4.20 What alternatives might be considered to ensure the efficient delivery of electricity to meet local requirements?

4.21 What factors should be considered to support any transition to alternate service delivery models or provider as the more efficient means to meet localised energy supply?

4.3.2 Local government and supply of electricity

Queensland local governments’ primary role in the electricity sector relates to planning functions. The Integrated Development Assessment System sets out a process for councils and other agencies to assess and decide on various types of land use and development proposals. The IDC on Electricity Sector Reform commented on the failure of state and local planning frameworks and instruments to appropriately incorporate planning for electricity infrastructure, which lead to electricity infrastructure being incorporated as a matter of State interest in the planning framework.

Local governments’ representative associations and some individual councils also retain a key role in advocating for and supporting localised electricity supply solutions and demand side solutions. Brisbane City Council has been particularly active in this space through its City Smart initiative, including the CBD District Cooling System proposal and EV charging stations.

As part of it’s a Solar Future policy, the Queensland Government has committed to investigate whether the provision of electricity in remote areas can be opened up to competition from local governments. This would provide communities potential localised solutions, including the facilitation of off-the-grid technologies.

However, while Queensland local governments were among the very first providers of electricity supply and were instrumental in developing local supply well into the twentieth century, councils no longer have a central role in the production or sale of electricity. Winton Shire Council’s recent announcement of its intention to commission a geothermal plant to power council installations is a notable exception. We understand that other Queensland local governments may be examining the potential for similar arrangements.

There are overseas examples of local governments owning and operating network infrastructure and generation assets, and selling electricity to their communities. In the United States, for example, there are more than 2,000 community-owned electric utilities serving over 45 million people and about 3 million businesses. Some of the nation’s largest cities such as Los Angeles operate publicly-owned electric utilities, but many utilities are small. The utilities are not-for-profit, with some directly governed by the relevant municipal council and others controlled by utility boards.

While these local arrangements have been a long-standing part of the electricity sector in the United States, in Germany local communities are regaining ownership of electricity supply. Seventy-two municipal power utilities have been founded since 2005, driven by factors ranging

145 See https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-power/a-p-factandfigures?_adf.ctrl-state=384ckdxa_21&_afrLoop=6698770168742
146 American Public Power Association, Public Power’s role in the electricity industry, page 1.
from environmental to local economic development objectives. Again, the size of municipal power utilities varies, from large cities to small villages.

There are technical, legal and economic risks associated with transferring assets and responsibilities from government-owned utilities to another entity, including a local government. Parties would need to agree, or an independent arbiter would need to set, a price for the assets being transferred. Local governments would need to develop or buy the expertise needed to supply electricity. Guarantees about how electricity is provided if the local government cannot fulfil its obligations would also be needed. Local supply may only be financially viable if subsidised by accessing the UTP CSO, or through feed-in tariffs for renewable energy generated by local governments.

### Questions

1. **4.22** What are the opportunities for, and barriers to, local governments becoming more involved in the supply of electricity?

2. **4.23** What objectives might be better met through local involvement in the supply of electricity, and what are the potential risks and benefits for electricity prices and supply chain productivity?

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147 Wagner O & Berlo K (2015), *The wave of remunicipalisation of energy networks and supply in Germany: the establishment of 72 new municipal power utilities.*
5 CUSTOMER PARTICIPATION AND SUPPORT IN THE ELECTRICITY MARKET

The Terms of Reference ask for options on a range of consumer-related issues. This chapter looks at demand side responses and consumer behaviour more broadly, including approaches to engagement, education and support. It also considers questions about support for consumers, and in particular vulnerable consumers, in relation to tariff reform and concessions.

5.1 Consumer behaviour and engagement

5.1.1 Importance of the consumer role in changing electricity market

The role of the consumer in the energy market is increasingly changing, as they are offered greater information and product innovation. Consumer responses are also driving changes in the electricity market. While electricity traditionally has been characterised as inelastic and non-substitutable, recent sharp price increases have driven consumer response either through greater energy efficiency or technology innovation. Large numbers of Queensland electricity consumers are demonstrating this, having chosen to access new retail opportunities (for example, the 70 percent of SEQ customers on market contracts) and technology options (there are around 1 in 4 or 28 per cent of Queensland households with solar PV).148

With the introduction of retail competition, moves to increase demand-side participation and advances in technology, customers now receive information on the electricity market from diverse sources. Enabled by advanced metering and home energy management technologies that provide data about their electricity usage, consumers can also access new tools and programs to help them manage their energy usage better.

However, these tools and information may still fail to incentivise customers to become more energy efficient or persuade them to change their consumption patterns, providers or products. Equally, the ability to respond is not uniform across all consumers, with some not having the capacity or access to participate in the market and realise potential benefits and opportunities.

The absence of active consumer participation from a segment of the market will mean maximum competitive pressure is not exerted upon market participants to improve their offerings, innovate where possible and lower their prices. Well-informed consumers who engage confidently and actively with the market will be critical to the continued evolution of the electricity sector, including to improve supply chain productivity and price outcomes.

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Questions

5.1 What are the barriers to improving consumer participation in the electricity market?
5.2 What are the benefits to the productivity of the electricity market and broader supply chain in increasing customer participation, and how can these benefits be measured?

5.1.2 Consumer behaviour and capacity for adaptation

Various studies have been undertaken to understand customer behaviour in the energy market, particularly in relation to energy efficiency and demand management. The findings indicate a new, more active energy consumer – including so-called ‘prosumers’ who are both producers and consumers of electricity – is emerging with the potential to reshape the relationship between customers and electricity providers.

However, even when information is available, cognitive biases, motivations and other ‘predictably irrational’ tendencies influence, to varying degrees, consumer choice and behaviour. For example, the CSIRO has found that the greatest barriers to the uptake of optional cost-reflective pricing appears to be consumers’ aversion to making any kind of choice, which is magnified as the decision-making environment grows more complex. They found that the ‘pervasive human preference for simplicity, familiarity and certainty’ means that consumers will stick to default settings, even given the prospect of gains.

Consumers can also have a tendency to ‘satisfice’ (‘settle for ‘good enough’ rather than ‘best’), acquiring and processing only enough information to reach a satisfactory decision and using simple rules of thumb to make decisions in complex situations. This can come at a cost, with customers missing opportunities when faced with more information and/or options. The 2014 Queensland Household Energy Survey found that ‘ambivalent’ consumers (who use energy how they wish, with little care about monetary savings) are driving demand in Queensland.

In some cases consumers will maintain or escalate their commitment to an endeavour, or use of a product or service, in order to ensure that they ‘fully recover’ the time, effort and money invested in it. For example, a consumer who has put time, effort and money to purchase an electrical appliance or technology may tend to use it more, even when not necessarily required. A consumer’s decision to consume electricity is largely disconnected from the costs of making that choice. Research shows most residential customers have limited awareness of their energy use, what appliances contribute most to consumption, or the importance of timing in the supply and use of electricity. Electricity bills are often received and paid well after the electricity is consumed and are a small proportion of total expenditure.

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150 These include using shortcuts and rules of thumb to deal with complexity, weighing losses more than equal-sized gains, preferring lower-value certainties over higher-value risks, and seeking to conform to social norms.


152 Ibid., pages 42 and 44.


154 The demand for electricity services is a derived demand that reflects the types of electricity-using appliances that exist.

155 Boughen N et.al. (2013), op.cit, page 20.
The 2014 Queensland Household Energy Survey found that despite large increases in electricity prices, customer concern about their ongoing ability to pay their electricity bills has remained stable overtime. This reflects that customers:\(^{156}\)

- consider electricity as an ‘essential’ item and as a result pay their electricity bill in priority over other household expenses/social activities; and
- have become increasingly accustomed to paying large electricity bills.

There are also some consumers who have limited capacity, access or discretion to engage with the market. This can be because these consumers rent their homes and therefore do not have discretion to implement changes to the structure or major appliances; cannot afford more efficient appliances; may not easily be able to take advantage of online tools and mass media (which are a way increasingly used to provide information);\(^{157}\) or because they are otherwise unable to shift their consumption in response to price signals (for example, when medical treatments are required at given intervals or times).

These complexities increase when consumers make decisions relating to emerging electricity technologies which involve more uncertainty and risk. The CSIRO noted as issues the lack of real-world Australian experience with emerging technologies across the range of potential usage scenarios, and the lag between the latest technologies and standards and regulation.\(^{158}\)

Current attitudes about technology also can influence the trajectory a technology will take. The CSIRO notes that many emerging electricity technologies have received mixed reactions, but that any initial negative reactions can be overcome once knowledge of the technology increases and key concerns are addressed.\(^{159}\) This means that reducing uncertainty around emerging technologies and building trust will be important. There is also opportunity for early engagement, where customers’ attitudes are not yet strongly formed.

Questions

5.3 What is the existing level of consumer knowledge and understanding of new electricity sector business models, products and services, and technologies?

5.4 How will future developments, including changes in technology and the growth of new markets and business models, influence consumers’ participation in electricity markets?

5.2 Consumer access to information, education and support

Research suggests retailers will need to differentiate their services and capabilities to deal better with a more active consumer base and more diverse consumer preferences.\(^{160}\) Better customer engagement in the retail market is therefore likely to be an important factor in the success of future market developments.

Information gaps still exist for some consumers in some parts of the market, and some consumers may be making decisions that are unnecessarily exposing them to costs. The AEMC found that there were fairly high levels of interest in issues associated with energy in SEQ, but that many customers find the various offers confusing and very few know exactly how they are

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\(^{156}\) Colmar Brunton (2015), op. cit., pages 4 and 23.


\(^{159}\) Boughen N et.al. (2013), op. cit., page iii.

\(^{160}\) Accenture (2010), op. cit., page 35.
billed, how prices are set and what contributes to electricity charges. The AEMC also noted that in general, consumers tend to overstate their confidence when it comes to understanding the options and offers that are available for them to choose from.

Consumers can access information to inform their electricity consumption decisions in a number of ways, including from the market directly and through business or industry- and consumer group- led initiatives. Electricity retailers have a direct interest in ensuring customers are informed about various product offerings, to improve the performance of their business. In its research into community information needs related to the advanced meter roll out in Victoria, the Consumer Utilities Advocacy Centre found that community agencies also have an important role to play acting as information brokers and educators for their clients or members.

Governments at all levels have also become involved, through regulation, funding or delivering programs designed to address existing information and behavioural barriers, or otherwise to promote consumer interests. These include reforms under the NECF requiring retailers to:

- publish standing and market offer prices prominently on their websites, in accordance with the AER’s Retail Pricing Information Guidelines
- provide the AER with information relating to the presentation of standing offers and market offers, which the AER then uses in its price comparator website, EnergyMadeEasy
- advise consumers entering a market retail contract about whether tariffs, charges or benefits can change and when consumers will be notified about price changes.

Consumers (or their authorised representatives) can also now request information about their electricity consumption data from retailers and distributors with minimum requirements relating to the format, time frames and costs to take effect on 1 March 2016.

The AEMC has recommended that governments increase efforts to raise awareness of existing information and tools (including independent comparator websites) and make these tools more user-friendly. EnergyMadeEasy can assist residential and small business customers to find their best energy offer. The Queensland government’s ‘Switch and Save Electricity Price Calculator’ applies to small customers on farming and irrigation tariffs.

Improving consumer engagement in the market through better targeting of information and support for more effective decision making tools and processes was identified as a key action in PowerQ. Government information and education campaigns (like the NSW Government campaign ‘The Power’s in Your Hands’) advise consumers of changes in the market and raise awareness about how to change energy plans and where to access information to make informed decisions.

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163 The Retail Pricing Information Guidelines have been in operation since 2012 and were last updated in August 2015, to commence on 1 February 2016.
165 Australia Energy Market Commission (2014e), Final rule determination: Customer access to information about their energy consumption.
The Queensland Government is investing in targeted programs to build capacity among specific consumer groups, and has worked with business and community organisations to deliver relevant programs. Examples include:

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<th>Program</th>
<th>Description</th>
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<tr>
<td>Low Income Advocacy Agreement (for energy and water)</td>
<td>Builds the capacity of community organisations to deliver information about energy pricing and tariffs, how customers can access hardship support (e.g. concessions and rebates), alternative bill payment methods, and advice on how to shop around and negotiate with retailers for the best energy deals</td>
</tr>
<tr>
<td>Residential and Small Business Agreement (with QCOSS and CCIQ)</td>
<td>Uses activities like webinars and workshops to educate consumers about understanding their bills and contracts, and tools and tips to reduce costs</td>
</tr>
<tr>
<td>Irrigators Energy Savers Project/Energy Savers Plus (with Ergon Energy and QFF)</td>
<td>Conducts energy audits of agricultural businesses particularly regarding high energy use infrastructure to identify potential savings and provide options for solution(s).</td>
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Programs like these may be useful for informing and educating consumers about the choices available to them if they have mistrust in the information from energy businesses. The AEMC found that suspicion about the trustworthiness of some energy companies is an important underlying barrier to consumers investigating different energy companies and plans with a view to switching offers. This highlights the importance for consumers to have access to clear and easy to understand information from trusted sources.

Questions

5.5 What are the key information gaps in consumer knowledge and understanding of electricity markets?

5.6 What have industry or consumer groups done to address existing information and behavioural barriers, and how effective have these strategies been?

5.3 Customer impacts of network tariff reform

5.3.1 Drivers for electricity network tariff reform

Cost-reflective tariffs send price signals to customers about the underlying cost of supplying electricity and the customers’ use of the electricity system. Well-designed tariffs should support more efficient use of network infrastructure by reducing peak demand and reduce the need to spend more on infrastructure over the longer-term.

The retail tariff currently used by most residential and small business customers in Queensland is a simple two-part tariff comprising a consumption charge and fixed charge. The tariff has low business costs (e.g. administration and metering). However, this type of tariff does not offer customers financial incentives to change their behaviour in ways that reduce costs, and tends to result in cross-subsidies, inefficient investment in network capacity and corresponding network price increases.

In 2015-16, the QCA finalised a three year transition to rebalance the fixed and variable components of the general residential tariff – Tariff 11. Historically, the fixed charge was set below cost and the variable charge above cost, and the QCA’s rebalancing transition rectified the

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lack of cost reflectivity in each of these components. However, Tariff 11 remains a ‘flat’ tariff which does not provide signals about the relative costs of supply at different times.

5.3.2 The transition to cost-reflective pricing

A number of recent industry reports have recommended that network businesses change the way they set tariffs to better reflect the drivers of network investment. The Electricity Expert Panel (the Panel) established by the former Queensland Government considered what would improve the long-term stability and efficiency of Queensland’s electricity sector in a report released in December 2014. The Panel found that:

- improving the cost-reflectivity of tariff structures is the most important aspect of stabilising network tariff prices in the long term;
- further increases to the fixed charge (beyond 2015-16) are unlikely to stabilise network tariff prices, because a fixed charge is a relatively blunt price instrument and provides no signal for consumers to reduce peak demand; and
- demand-based tariffs are the strongest performing network tariff in terms of cost-reflectivity, equity and revenue stability because they more effectively signal to consumers the amount of network infrastructure they use.

Demand-based tariffs include a charge based on the maximum rate at which a customer uses electricity at a particular moment in time – the customer’s maximum demand. Customers with a higher maximum demand are charged more than those with a lower maximum demand. This type of tariff is fairer in reflecting the cost impacts of different consumers and provides customers with the option of changing how they use electricity to reduce their bills.

Questions

5.7 What are the potential benefits and risks in the transition to cost-reflective pricing, in terms of electricity prices and supply chain productivity?

5.8 In what ways could customers be better supported and equipped to understand and accept more cost-reflective tariff structures?

5.3.3 Electricity network businesses’ tariff reform strategies

Energex and Ergon Energy, have commenced network tariff reform programs, in part, to meet new requirements introduced in late 2014 as part of the AEMC’s Distribution Pricing Principles rule change. Energex and Ergon Energy must each submit a 2016-2020 Tariff Structure Statement to the AER in November 2015 that will detail:

- how their pricing decisions will be guided by the pricing objective that network prices should reflect the business’ efficient costs of providing services to each customer;
- their future tariff structures and pricing methodologies;
- how they have engaged with customers on the development of new tariffs; and

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173 Queensland Competition Authority (2015a), op. cit., page iv.
how they have considered customer impacts, in accordance with the pricing principles set out in clause 6.18.5 of the National Electricity Rules.

Energex has proposed introducing a voluntary demand-based network tariff for residential customers in 2016-17 and an equivalent tariff for small business customers in 2017-18. 176 While the results of Energex’s public consultation on network tariffs indicate electricity retailers and customers broadly support the voluntary introduction of a demand-based network tariff, support is conditional on the tariff’s structure and implementation. 177

Ergon Energy’s new time-of-use (ToU) tariff structures are reflected in the retail Notified Prices determined by the QCA for 2015-16. The QCA has split the existing retail ToU tariffs for small customers into two sets of tariffs, one for South East Queensland and one for regional Queensland. Each set of ToU tariffs is based on the network tariff that applies in the relevant area, with the network tariffs for regional Queensland reduced to South East Queensland cost levels to maintain the UTP.

Both businesses’ demand-based tariffs are voluntary. This will place greater emphasis on their ability to convert customers to the new charging regime, with only those customers who will benefit from lower bills likely to change.

The limited penetration of advanced meters in Queensland will affect the uptake of demand-based tariffs. The COAG Energy Council has committed to a market-led rollout of advanced meters, and the AEMC is progressing a rule change to provide for competition in metering. The deployment of advanced metering will rely on retailers, networks and customers valuing the data available from these meters.

### Questions

#### 5.9 What barriers and costs does a voluntary uptake of advanced metering present for the rate at which cost-reflective tariffs are able to be adopted?

#### 5.3.4 Customer impacts

More cost-reflective tariff structures will inevitably result in some customers benefiting and paying less, while others will pay more if they do not adapt to the new price signals. In some cases, consumers will not be able to adapt to new price signals, and may require assistance.

The QCA’s rebalancing of the Tariff 11 fixed charge from 2013 to 2015 illustrated how more cost-reflective tariffs can affect different consumer groups. Smaller customers faced a larger percentage increase in their bills than the average customer, because the fixed charge was a larger part of their bill, while larger customers’ bills reduced. 178

Providing customers with equality of opportunities to adopt new tariffs and technologies to assist them to control their electricity usage and bills has also been raised as a concern for low-income households and those in the rental market. 179

However, a comprehensive understanding of potential impacts remains difficult with very little data available on the patterns of small customer demand in Queensland, given that such data is not collected by most customers’ meters. The link between customer vulnerability (which is not

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178 Queensland Competition Authority (2013c), Final Determination: Regulated retail electricity prices 2013-14, pages 84-5.
formally defined in Queensland) and load profile (which becomes important when charging for demand), is also unclear.

We note Energex’s real time tariff study involving customers that choose to use its new demand tariffs. Energex’s preliminary investigations suggest that impacts will be mixed for low and lower middle income households, with some of these households better off under demand-based tariffs and some worse off if they do not tailor the way they use electricity to the new price signal.

Ergon Energy also proposes a real time study. It has conducted a similar preliminary exercise, segmenting a small group of households also involved in earlier tariff trials, based on number of people and employment status. Again, the results are mixed within each cohort. For example, some large families and people in part-time employment are better off under demand-based tariffs, while some are worse off.

Ergon Energy’s projections illustrate how reforming network tariffs in the right way will help keep network prices low to the benefit of all customers over the long term, while not changing network tariffs is likely to increase network prices.

A recent study by the CSIRO Energy Flagship suggests residential customers find all forms of cost-reflective pricing less attractive than simple tariffs like Tariff 11. Customers in the study seemed to be especially resistant to demand pricing, potentially due to its novelty and complexity. The study also found that while ToU pricing was more appealing to customers than demand pricing, it was still less appealing than simple tariffs.

As the focal point for customers, retailers have also said they prefer network tariffs that strike the right balance between being cost reflective and simple enough for customers to understand. The AEMC has noted that the prices of various retail offers should reflect retailers’ costs, including any risks that retailers manage for customers, but that this does not mean retail offers must match the structure of network tariffs, and that retailers have tools to help manage or price the risk of differences between network and retail tariff structures. This suggests that in a competitive retail market some retailers may use innovative ways to manage demand charges on behalf of their customers and provide the customers with the type of price offers they prefer.

Questions

5.10 What are the benefits and risks of cost-reflective pricing?

5.11 What strategies or safeguards could support low-income and vulnerable consumers in the transition to new tariff structures?

5.12 What is the role of retailers in the transition to new tariff structures?

181 Ibid., page 15.
184 Stenner, K et al. (2015), op. cit., page 42
185 Energy Retailers Association of Australia (2015), Submission to the Victorian department of state development business and innovation’s network tariff reform issues paper, page 1.
5.3.5 The role for demand side response

CSIRO has also suggested the problem is not only how to get customers to take up and effectively use more cost-reflective pricing, but rather how best to reduce peak demand in ways benefitting both customers and networks. CSIRO suggested tariff reform could be one element of this effort, which could also involve more automated use of high demand household appliances, simple in-home devices that remind customers to take energy saving action, plus innovative building and energy technology design.\(^\text{187}\)

Misplaced or ‘split’ incentives are frequently cited as a barrier to greater uptake of energy efficiency investments, but they are also evident as a barrier in consumer take-up of demand management\(^\text{188}\) and renewable energy technology\(^\text{189}\) opportunities.

However, even consumers who have capacity to make changes frequently under-invest in energy efficiency and demand management tools that would benefit them. Recently the Grattan Institute highlighted research showing that customers make poor decisions about energy efficiency and therefore miss opportunities to save money.\(^\text{190}\)

5.3.6 Energy efficiency

Energy efficiency is a way of managing and restraining energy consumption to deliver more services using the same amount of energy, or the same services using less energy. A combination of regulation and incentives can be used to support more efficient use of energy. In Queensland, government programs have included:

<table>
<thead>
<tr>
<th>Regulation and standards</th>
<th>Incentives</th>
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<tr>
<td>• Inclusion of standards and requirements in regulatory instruments such as energy efficiency requirements in the National Construction Code.</td>
<td>• EcoBiz, which is an initiative delivered by the Chamber of Commerce and Industry Queensland to assist Queensland businesses save money on energy, water and waste bills through coaching, site surveys, benchmarking tools and workshops.</td>
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<td>• The imposition of minimum energy performance standards on a range of electrical appliances (initially under the Electricity Act, but now replaced by a national scheme under the Greenhouse and Energy Minimum Standards Act 2012 (Cwth)).</td>
<td>• The ClimateSmart Home Service (closed), was an in-home service and audit aimed at helping residents save money on energy and water bills.</td>
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<td>• Between 1 March 2006 and 31 January 2013, owners of new houses and townhouses were required to install an energy efficient hot water system. This requirement also applied to replacement systems between 1 January 2010 and 31 January 2013. Both requirements were repealed on 1 February 2013.</td>
<td>• Energy Savers Plus Program, offered by Ergon Energy, which is working within the agricultural sector to inform and educate farmers on the benefits of adopting more efficient technologies and provide the necessary tools to manage and reduce electricity usage.</td>
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</table>

Where consumers do not have the requisite information to make efficient choices, governments have a range of options including the regulation of appliances (such as through the Minimum Energy Performance Standards or MEPS). Raising the minimum standards in the market increases energy efficiency of all consumers over time. Upstream regulation of other factors such as building codes and minimum efficiency standards for rental accommodation may be appropriate particularly where consumers do not have the opportunity to participate (for example, in a tenancy situation).

\(^{187}\) Stenner, K et.al. (2015), *op. cit.*, page 47
\(^{190}\) Daley J et.al. (2011), *Learning the hard way: Australian policies to reduce carbon emissions*, page 37
5.3.7 Demand Management

Consumer participation in demand management faces similar challenges. At a household or premises level, individual consumers are not incentivised to make potentially costly changes to their demand so long as the benefits of reducing that demand accrue only to network businesses and (less directly) to all consumers through reduced network charges. Due to the slow voluntary uptake of advanced metering, a majority of residential consumers in Queensland likely lack the information required to even monitor their demand, let alone determine how to make changes to it. Energex offers a number of incentives for consumers to manage peak demand, including PeakSmart air-conditioning, where a reward is offered for installing a PeakSmart enabled air-conditioner that can be remotely interrupted for a set period, and hot water rewards if you connect your hot water system to an economy or controlled load electricity tariff.

Questions

5.13 In what ways do the benefits of energy efficiency and demand management programs help consumers offset price risks?

5.14 What types of incentives would be the most effective in balancing benefits and costs to achieve better outcomes in terms of electricity pricing and supply chain productivity?

5.15 What are the benefits and risks in the Queensland Government providing incentives for households, businesses and industries to become more energy efficient or manage their peak levels of demand, including implementing energy efficiency standards for sectors within its jurisdictional authority?

5.16 What barriers and costs does a voluntary uptake of advanced metering present for energy efficiency and demand management tools?

5.4 Concessions

The Terms of Reference ask us to provide advice on options in relation to the existing energy concessions framework in Queensland, noting that energy concessions are poorly targeted and do not assist the most vulnerable customers.

We have also been asked to develop options that improve outcomes and minimise impacts on vulnerable consumers, while at the same time balancing the objectives of fairness and equity and ensuring responsible and measured management of the State’s finances.

The provision of concessions sits within a broader support framework that involves other agencies and market participants (e.g. Centrelink, Smart Service Queensland, Department of Communities, Queensland Health and retailers’ hardship programs). However, we are considering electricity concessions only.

5.4.1 Framework for assessing the effectiveness of the concessions framework

The IDC considered there was no long-term strategy or targeted policy intent for Queensland’s concessions framework, which undermined the efficiency and effectiveness of the customer assistance measures.\(^{191}\) We propose that the existing electricity concessions be assessed against the design principles proposed by the Queensland Council of Social Service (QCOSS) in its ‘Energising concessions policy in Australia’ document.\(^{192}\)

\(^{191}\) Interdepartmental Committee on Electricity Sector reform (2013), op. cit., page 93.

• a clear objective: concessions should achieve clearly articulated outcomes
• adequacy: households should receive support that is adequate to achieve clearly articulated outcomes
• equity: concessions should deliver equitable outcomes for consumers
• adaptability: concessions should be adaptive in order to accommodate changing market developments and changing community needs; and
• transparency: concessions should be transparent and not dilute pricing signals.

Questions
5.17 Are the principles outlined above useful for assessing the Queensland energy concession framework and identifying improvements?
5.18 What other key criteria or principles should be used to assess the energy concessions framework?

5.4.2 Defining vulnerable consumers
The Terms of Reference notes that energy concessions are currently poorly targeted, and do not assist the most vulnerable customers. This aligns with stakeholder concerns about eligibility for concessions, and the targeting of funding to those people most in need.\textsuperscript{193, 194}

In order to target concessions better to the most vulnerable consumers, it is necessary to define a vulnerable consumer. There is no generally agreed definition of a vulnerable consumer in Australia, although a number of stakeholders have developed individual definitions.\textsuperscript{195} The differing views on what defines a vulnerable consumer can create inequity and inconsistency as to what constitutes a low income or disadvantaged consumer.

Questions
5.19 Is it appropriate that the level of household income is used as a measure to define vulnerable consumers, or are there other measures that would more effectively identify vulnerable consumers?

5.4.3 Eligibility for electricity concessions
The Queensland Government provides a range of electricity concessions to assist people, including the Electricity Rebate, the Medical Cooling and Heating Electricity Concession, the Electricity Life Support Concession and the Home Energy Emergency Assistance Scheme.

The most widely accessed concession is the Electricity Rebate which provides $320.97 per year (GST inclusive) to electricity customers who hold a Pensioner Concession Card, Department of Veterans’ Affairs Gold Card or Queensland Seniors Card.

A quarter of all Queensland households currently access the Electricity Rebate, equating to almost 500,000 rebate recipients.\textsuperscript{196} The Electricity Rebate is forecast to cost $154.3 million in

\textsuperscript{194} Queensland Council of Social Services (2014b), \textit{op. cit.}, page 12.
\textsuperscript{195} Kemp A, et.al. (2014), \textit{Supporting Vulnerable Energy Consumers}, page 2.
\textsuperscript{196} Data provided by Smart Service Queensland, Department of Science, Information Technology and Innovation, August 2015.
2015-16, approximately 92 per cent of the Queensland Government’s total expenditure on electricity concessions.¹⁹⁷

Unlike other states, Queensland does not provide the Electricity Rebate to holders of a Commonwealth Government Health Care Card. This is despite Health Care Card holders having to be below an income threshold which is generally lower than the eligibility threshold placed on holders of the Pensioner Concession Card.

At the same time, unlike other states, Queensland provides the Electricity Rebate to holders of the Queensland Seniors Card, which is not means tested and is available to anyone over the age of 65 who is not working full-time.

These eligibility arrangements result in some high-income households being able to access the Electricity Rebate and other assistance, while low income households remain ineligible.

The specific-purpose medical concessions have differing eligibility requirements that are based on qualifying medical conditions and dependence on the use of specific equipment. Recipients of specific-purpose medical concessions are also able to access the Electricity Rebate however, should they also meet the eligibility requirements for this concession.

We note a wide variation in the approaches of state jurisdictions in establishing eligibility for, and the structures of, electricity concessions. A summary of jurisdictional electricity concession schemes including eligibility is at Appendix C.

Questions

5.20 How could electricity concessions be better targeted to assist customers most in need?

5.4.4 Structure of electricity concessions

In addition to setting appropriate eligibility criteria, the structure of the concessions can also impact their effectiveness and efficiency.

Under the current flat rebate structure, all eligible customers receive the same dollar amount regardless of household characteristics, consumption or need. This may not be the most equitable or efficient approach.

Some jurisdictions have implemented rebate structures based on electricity costs that provide more assistance to households that consume more electricity. Victoria structures its main electricity concession as a percentage of the bill, which provides the same proportional support to all consumers. Western Australia provides fixed concessions as well as additional amounts to households based on the number of dependent children.

Some Queensland Government concessions match the value of assistance to assessed need, with differing payments under the Electricity Life Support Concession scheme depending on the specific life support equipment required.¹⁹⁸

Questions

5.21 What alternatives to the flat rebate structure would better assist vulnerable customers?

5.4.5 **Ongoing sustainability of Queensland’s electricity concessions framework**

In recent years, the value of the Electricity Rebate and other concessions has broadly followed the increase in the cost of a ‘typical’ electricity bill, generally increasing by the same proportion as the general residential tariff, Tariff 11. This could be an appropriate approach to incrementing the value of the Electricity Rebate in years when the typical bill increase is representative of the impact that price changes had on the broader population.

However, the transitioning of Tariff 11 to a cost-reflective tariff through greater increases to the fixed daily charge and smaller reductions in the volumetric consumption-based charge, have delivered higher bill increases than a typical household for low consumption consumers, as they do not consume enough to offset the increase in fixed charge.

In its 2015-16 Final Determination, the QCA noted that low consumption households have been most impacted by the transition of Tariff 11, and they consider that the needs of these customers are best met through targeted welfare assistance measures.199 Lower consumption households are not necessarily the most vulnerable however, as there is a range of customer characteristics that determine consumption.

The Terms of Reference requires our advice to balance the objectives of fairness and equity and vulnerable customer impacts with a responsible and measured management of the State's finances. Balancing these objectives requires that we consider the competing objectives of providing assistance to vulnerable consumers and maintaining fiscal responsibility.

Eligibility and value of the rebates will influence the ongoing financial sustainability of the concessions framework. Assuming no changes are made to the current eligibility framework, the Queensland Government’s concessions liability can only be expected to increase given projections that the number of people aged 65 and over will double by 2040.200

The interaction between the Australian and Queensland governments in relation to social welfare payments is also an important consideration. In 2014, the Australian Government ceased paying certain concessions for pensioner and seniors card holders (at a cost to Queensland of $54.2 million in 2014–15 and $223.2 million over four years).

We note that the matter of a national concessions framework to provide effective and adequate protections for vulnerable customers has also been raised by stakeholders.201

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**Questions**

5.22 Are the current concession levels sufficient to provide meaningful support to vulnerable consumers and, if changes are to be made, what structures and levels of support should be implemented?

5.23 In a finite public funding environment, which consumers should be targeted for financial support in relation to electricity affordability?

5.24 What should the Queensland Government advocate for in a national review of concessions and rebates?

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199 Queensland Competition Authority (2015a), *op. cit.*, page 44.

200 Australian Bureau of Statistics, Table a3 of “Population Projections” publication (no 3222.0).

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Name</th>
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<tr>
<td>ABBREVIATIONS</td>
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</tr>
<tr>
<td>ACCC</td>
<td>Australian Competition and Consumer Commission</td>
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<td>ACT</td>
<td>Australian Capital Territory</td>
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<td>AEMA</td>
<td>Australian Energy Market Agreement</td>
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<td>AEMC</td>
<td>Australian Energy Market Commission</td>
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<td>AEMO</td>
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<td>Australian Energy Regulator</td>
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<tr>
<td>COAG</td>
<td>Council of Australian Governments</td>
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<td>CSO</td>
<td>Community Service Obligation</td>
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<tr>
<td>c/kWh</td>
<td>Cents per kilowatt-hour</td>
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<td>DNSP</td>
<td>Distribution network service provider</td>
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<td>ECPLA Act</td>
<td>Electricity Competition and Protection Legislation Amendment Act 2014 (Qld)</td>
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<td>Ergon Energy</td>
<td>Ergon Energy Corporation Limited (electricity distribution arm and parent company)</td>
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<tr>
<td>EEQ</td>
<td>Ergon Energy Queensland (electricity retail arm)</td>
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<td>Electricity Act</td>
<td>Electricity Act 1994 (Qld)</td>
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<td>FRC</td>
<td>Full retail competition</td>
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<tr>
<td>Government</td>
<td>Queensland Government</td>
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<tr>
<td>GST</td>
<td>Goods and services tax</td>
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<tr>
<td>GWh</td>
<td>Gigawatt-hour</td>
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<tr>
<td>IDC</td>
<td>Interdepartmental Committee on Electricity Sector Reform</td>
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<tr>
<td>kWh</td>
<td>Kilowatt-hour</td>
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<tr>
<td>LNG</td>
<td>Liquefied natural gas</td>
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<tr>
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<td>MWh</td>
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<td>National Competition Policy</td>
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<td>Description</td>
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<td>Australian Productivity Commission</td>
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<td>Photovoltaic</td>
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<td>R</td>
<td>Renewable Energy Target</td>
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<td>SBS</td>
<td>Solar Bonus Scheme</td>
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<td>SCER</td>
<td>Standing Council on Energy and Resources</td>
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<td>SEQ</td>
<td>South-east Queensland</td>
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<td>SRES</td>
<td>Small-scale Renewable Energy Scheme</td>
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<tr>
<td>TNSP</td>
<td>Transmission network service provider</td>
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<td>ToU</td>
<td>Time of use</td>
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<td>U</td>
<td>Uniform Tariff Policy</td>
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APPENDIX A: TERMS OF REFERENCE

Queensland Productivity Commission – Public Inquiry into Electricity Prices

Terms of Reference

Objective
The objective of the inquiry is to examine electricity pricing in Queensland and provide the government with options that improve outcomes for consumers, while balancing the objectives of:

- a competitive electricity market;
- productivity growth in the energy industry and among energy users;
- appropriate reliability, safety and security of electricity supply;
- efficient investment and operation of electricity infrastructure;
- environmental outcomes;
- fairness and equity;
- minimising impacts on vulnerable customers; and
- responsible and measured management of the State’s finances.

Context
In the period from 2011-12 to 2014-15, electricity prices have increased by more than 50 per cent on average in Queensland. An increase in the fixed price for electricity of 219 per cent for residential customers during this period has exacerbated the impacts of these price rises for low-income households.

Scope
The Government is seeking expert advice from the QPC on options to promote the long-term interests of electricity consumers, place downward pressure on electricity prices and ensure a dynamic and responsive pricing framework. In particular, the QPC should examine the underlying drivers of electricity prices and engage with a wide range of stakeholders including consumers, industry and government to develop options which can deliver a net benefit to the economy while protecting vulnerable customers.

To enable the development of effective options, the scope of the Inquiry will be broad and should consider issues over the short, medium and long terms.

The Inquiry should consider the whole electricity supply chain and the contribution that each component makes to final prices for consumers. This will provide a foundation for developing policy options and also help to educate consumers on these issues. Key drivers include:

- generation costs;
- transmission costs;
- distribution costs;
- retail costs; and
- environmental scheme costs, such as the Renewable Energy Target and the Solar Bonus Scheme, that are recovered through electricity prices.
The QPC should also consider broader factors such as the structure of the energy sector, national governance and market operation, and the impact of these elements on electricity prices. It should draw on inter-jurisdictional experience to formulate evidence-based options.

It is expected that the QPC will undertake the Inquiry over a 10 month period. However, in order for Government to address key short-term/immediate policy issues, it is requested that the QPC provide an Interim Report on range of recommendations on key time-critical issues within 6 months of the start of the Inquiry, and in alignment with Tariff Structure Statements process.

Interim Report – Overview and short-term / immediate policy issues

The Interim Report should provide an overview of recent price increases and the relative impacts of each of the cost drivers listed above.

In keeping with the Government’s and QPC’s focus on promoting productivity, economic growth and jobs, the Interim Report should also examine the role of electricity prices in the economy. This may include both a macro-level assessment of the impact on Gross State Product and an industry-level analysis. This will also provide a baseline against which to estimate the impact of proposed policy measures.

In addition to these broad areas of investigation, the Government seeks recommendations from the QPC on the following specific policy issues:

1. **Retail price deregulation** - The Government seeks advice from the QPC on the costs and benefits of deregulation and whether the proposed market monitoring arrangements and consumer protections are sufficient to allow price regulation to be removed (Pending Government decision).

2. **Government election commitments** - the Government seeks the QPC’s views on policies and election commitments, including pricing issues associated with network and generator mergers and increased penetration of renewables, particularly solar. In relation to solar energy, the Government will seek the QPC’s advice on a fair price for solar energy via a separate, concurrent inquiry. The QPC should coordinate the two inquiries to ensure their recommendations are complementary and compatible.

3. **Network tariff reform** - the development of fairer and more efficient network tariffs will help to curb price increases by limiting the requirement for new network investment. While these tariffs will take effect in the medium to long-term, decisions regarding the roll-out of these tariffs will take place during 2015. Tariff reform will also have varying customers impacts and the Government is specifically interested in the outcomes for vulnerable customers.

4. **Other issues** - the QPC should include other issues viewed as critical for implementation 1 July 2016.

Final Report – Overall findings and longer term policy issues

The Final Report should provide a comprehensive discussion of the findings of the inquiry. However, the focus of the Final Report should be providing Government with options in relation to longer term or strategic policy issues.

There are a range of issues that will impact on prices over the longer-term and where Government action may improve the outcome. The Government seeks the QPC’s advice on options in relation to:

- Regional Queensland – including options to increase competition while maintaining the Uniform Tariff Policy; and farming and irrigation issues;
Concessions framework – energy concessions are currently poorly targeted and do not assist the most vulnerable customers;

Productivity in the supply chain;

Consumer behaviour;

Local Government – understanding opportunities for local government authorities to have direct involvement in the supply of electricity through community-based solutions; and

Emerging technologies – e.g. battery storage and their potential impact on electricity prices.

**Resourcing**

The QPC will be provided with a Project Team to undertake this Inquiry. This team will comprise experienced officers seconded from relevant agencies, including Queensland Treasury, the Department of Energy and Water Supply and the Queensland Competition Authority.

It is expected that the QPC will also engage expert advice from external sources where necessary.

**Stakeholder engagement**

The QPC will conduct comprehensive public and stakeholder consultation, including written submissions and public hearings throughout Queensland.

Consultation should occur with stakeholder groups including consumer groups, electricity businesses, unions, business and industry bodies, farmers and irrigators, market and regulatory bodies and government agencies and councils.

The QPC will be required to establish a Stakeholder Reference Group (SRG) to provide feedback on options being developed by the QPC prior to recommending options to Government. The SRG should be broadly representative of the stakeholder groups identified above.

**Timeframes**

Interim Report - delivered to Government by end January 2015.

Final Report – delivered to Government within 10 months of the start of the Inquiry.
## APPENDIX B: SUMMARY OF OTHER REVIEWS OF ELECTRICITY PRICING

<table>
<thead>
<tr>
<th>Inquiry</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair Price for Solar Inquiry</td>
<td>The Queensland Government commissioned the Queensland Productivity Commission on 28 August 2015 to undertake an inquiry into a fair price for solar exports. This inquiry is closely linked to the Electricity Pricing Inquiry, particularly in regards to the consideration of the impacts of renewable (and particularly solar) generation on electricity pricing. The QPC has ten months in which to complete this inquiry, with a final report due by mid-2016.</td>
<td>Ongoing (final report due May 2016)</td>
</tr>
<tr>
<td>Network businesses’ limited merits review and jurisdictional review applications in relation to NSW and ACT revenue determinations</td>
<td>The Australian Competition Tribunal (ACT) is currently considering appeals by the both the network businesses and the Public Interest Advocacy Centre in relation to the NSW and ACT network revenue determinations.</td>
<td>Ongoing (decisions on NSW/ACT expected by end 2015)</td>
</tr>
<tr>
<td>Ergon Energy and Energex Final Revenue Determinations for 2015-20 regulatory control period</td>
<td>The AER will by the end of October 2015 publish final revenue determinations for Ergon Energy and Energex, which will establish their maximum allowable revenue for the balance of the 2015-20 regulatory control period. The AER’s final decision will take into account revised proposals the businesses submitted in July following the AER’s preliminary determination in April 2015. Ergon Energy’s application for judicial review of its preliminary determination, specifically in relation to the transition pathway for operating expenditure in 2015-16, is currently under consideration by the ACT. Energex and Ergon Energy will have 15 working days after the AER publishes its decisions on their final revenue determinations (due by 31 October 2015) in which to decide whether to seek limited merits review by the ACT.</td>
<td>Ongoing (final decision required by end October 2015, with potential for limited merits appeal and judicial review)</td>
</tr>
<tr>
<td>Review of Governance Arrangements for Australian Energy Markets</td>
<td>In December 2014, the COAG Energy Council agreed to the Terms of Reference for a Review of Governance Arrangements for Australian Energy Markets. The Review has examined the broad energy market institutional structures created by COAG, including the legislative framework that establishes and assigns functions to institutions. A draft report was released in July 2015 addressing recommendations on potential areas of improvement. Final advice was scheduled to be provided to COAG Energy Council in September for consideration ahead of Council’s December 2015 meeting.</td>
<td>Ongoing (COAG Energy Council yet to announce decisions on review recommendations)</td>
</tr>
<tr>
<td>Retail Competition Review</td>
<td>The AEMC undertakes an annual NEM-wide competition review for the COAG Energy Council. The purpose of the review is to assess the state of competition for small customers in electricity and gas retail markets in all NEM jurisdictions. The 2015 review was released on 30 June 2015.</td>
<td>Annual Review</td>
</tr>
<tr>
<td>Australian Senate Inquiry into the Performance and Management of Electricity Network Companies</td>
<td>In October 2014, the Australian Senate referred an inquiry into the performance and management of electricity network companies to the Environment and Communications References Committee. In particular, the Committee was tasked with examining how electricity companies have calculated and presented costings and infrastructure charges, and the effects on energy users. The Committee presented its Final Report on 5 June 2015.</td>
<td>Completed</td>
</tr>
<tr>
<td>Energy White Paper</td>
<td>On 8 April 2015, the Australian Government released the Energy White Paper (EWP) which sets out the government’s policy</td>
<td>Implementation is</td>
</tr>
<tr>
<td>Inquiry</td>
<td>Description</td>
<td>Status</td>
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</tr>
<tr>
<td>(Australian Government)</td>
<td>framework to deliver competitively priced and reliable energy supply to households, business and international markets. The EWP includes a central role for the Council of Australian Governments (COAG) Energy Council in progressing market reforms, including a National Energy Productivity Plan.</td>
<td>ongoing</td>
</tr>
<tr>
<td>Competition Policy Review (the Harper Review)</td>
<td>In March 2014, the Australian Government commissioned an independent review of Australia’s competition policy, laws and institutions. The Final Report, released on 31 March 2015, makes 56 recommendations for reforms across all levels of government, including in relation to energy market reforms.</td>
<td>Completed, noting the Australian Government is yet to respond</td>
</tr>
<tr>
<td>Price Trends Review</td>
<td>The AEMC’s annual price trends report is focused on the factors driving residential electricity prices and provides an analysis of price trends across the supply chain in each state and territory. The most recent report was released in December 2014.</td>
<td>Annual Review</td>
</tr>
<tr>
<td>State of the Market report</td>
<td>The AER’s annual State of the Energy Market report provides a high level overview of energy market activity in Australia. The report focuses on activity over the past 12–18 months in those jurisdictions and areas in which the AER has regulatory responsibilities. The latest report was published in December 2014.</td>
<td>Annual review</td>
</tr>
<tr>
<td>Distribution Pricing Principles Rule Change</td>
<td>In November 2013, the then Standing Council on Energy and Resources submitted a rule change proposal to the AEMC to progress the Distribution Pricing Principles rule change agreed to as part of the Council’s response to the AEMC’s Power of Choice review. The AEMC’s final decision on the rule change establishes a new pricing objective for distribution businesses so prices reflect the efficient costs of providing network services to each consumer. This will allow consumers to compare the value they place on using the network with the costs of using it. Ergon Energy and Energex are required to submit Tariff Structure Statements to the AER by November 2015. The TSS will outline the price structures to apply for the 2015-20 regulatory period. Ergon Energy and Energex are currently consulting consumers on proposed network tariffs.</td>
<td>Completed</td>
</tr>
<tr>
<td>PowerQ: a 30-year strategy for Queensland’s electricity sector</td>
<td>In July 2012, the Queensland Government committed to developing the state’s first 30-year electricity strategy to provide a strategic and long-term vision for establishing a resilient, cost-effective and consumer-focused electricity supply. PowerQ was released on 20 June 2014 and set out clear goals and strategies with respect to consumers, the market and government for the short, medium and long term.</td>
<td>Completed</td>
</tr>
<tr>
<td>Review of Regional Retail Electricity Price Regulation</td>
<td>In October 2013, the Minister for Energy and Water Supply directed the Queensland Competition Authority (QCA) to investigate and report on matters relating to the Uniform Tariff Policy (UTP) and retail price regulation in regional Queensland. The QCA was required to consider the efficiency and effectiveness of the UTP, identify options for maintaining a UTP in the context of price deregulation in SEQ, and consider options that target subsidies to areas of greatest need. The QCA provided its final advice to the Minister on 30 April 2014.</td>
<td>Completed</td>
</tr>
<tr>
<td>Interdepartmental Committee on Electricity Sector Reform</td>
<td>In May 2012, the Queensland Government established an Interdepartmental Committee on Electricity Sector Reform (IDC) to scrutinise cost pressures on electricity prices - specifically network costs, electricity supply and retail competition. The IDC’s report contained a number of recommendations to address the...</td>
<td>Completed</td>
</tr>
<tr>
<td>Inquiry</td>
<td>Description</td>
<td>Status</td>
</tr>
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</tr>
<tr>
<td>Independent Review Panel on Network Costs</td>
<td>In association with the IDC, the Queensland Government commissioned an independent Review Panel on Network Costs to make recommendations in relation to network costs. The Panel’s interim report was published in December 2012, with its final report published in June 2013.</td>
<td>Completed</td>
</tr>
<tr>
<td>Queensland Commission of Audit</td>
<td>The Commission of Audit was established in 2012 to review the Queensland Government's financial position, and to make recommendations on strengthening the Queensland economy, improving the State’s financial position (including regaining a AAA credit rating) and ensuring value for money in the delivery of frontline services. The Commission’s Final Report and the Government’s response to the Commission’s recommendations were released publicly on 30 April 2013.</td>
<td>Completed</td>
</tr>
<tr>
<td>Electricity Network Regulatory Frameworks</td>
<td>The Australian Government requested the Productivity Commission to undertake an inquiry into electricity network frameworks, focussing on benchmarking arrangements and the effectiveness of the application by network businesses of the current regulatory regime for the evaluation and development of interregional network capacity in the NEM. The Commission’s final report was released publicly on 26 June 2013.</td>
<td>Completed</td>
</tr>
<tr>
<td>Power of Choice Review</td>
<td>Substantial reforms to the NEM are under way (through changes to the National Electricity Rules) following recommendations to the COAG Energy Council in the AEMC’s 2012 Power of Choice review. The Review set out a market-wide reform program to give consumers more opportunities to understand and take control of how they use electricity, and the costs associated with those decisions.</td>
<td>Implementation is ongoing</td>
</tr>
<tr>
<td>Economic Regulation of Networks Rule Changes</td>
<td>In September 2011, the AEMC initiated this rule change in response to proposals from the AER and the Energy Users’ Rule Change Committee. The final rule change provides for the AER to be better equipped to develop methods and processes to achieve efficient outcomes in setting prices for consumers, while also providing it flexibility to adapt its approaches to the nature of the business it is regulating. Following the AEMC’s rule change final decision in November 2012, the AER undertook the Better Regulation program in 2013 to give effect to the new arrangements from November 2013. The new rules are being applied in relation to the current round of network revenue determinations, commencing with NSW and ACT businesses in 2014.</td>
<td>Completed with implementation ongoing for current round of network revenue determinations</td>
</tr>
</tbody>
</table>
## APPENDIX C: SUMMARY OF JURISDICTIONAL ELECTRICITY SCHEMES 2015-16

### Key

<table>
<thead>
<tr>
<th>Concession</th>
<th>Eligibility</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Queensland</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity Rebate</td>
<td>CPCC, DVA Gold Card, Queensland Seniors Card</td>
<td>$320.97 pa</td>
<td>HCC holders not eligible</td>
</tr>
<tr>
<td>Medical Cooling and Heating Electricity Concession Scheme</td>
<td>CPCC, HCC, DVAPCC</td>
<td>$320.97 pa</td>
<td>Cannot regulate body temperature and must be Queensland resident.</td>
</tr>
<tr>
<td>Electricity Life Support</td>
<td>CPCC, HCC, Health Care Interim Voucher, Child Disability allowance, Queensland Seniors Card (eligibility determined by Queensland Health).</td>
<td>Amount per machine per year: Oxygen Concentrator $653.72 Kidney Dialysis Machine $437.76</td>
<td>For use of home-based oxygen concentrator or kidney dialysis machine. Must be a Queensland resident. Medical assessment required with restrictions on supply.</td>
</tr>
<tr>
<td>Home Energy Emergence Assistance Scheme</td>
<td>Concession card and have an income less than maximum income rate for part-age pensioners. Must be part of a retailer’s hardship program.</td>
<td>Up to $720 pa for a maximum of two consecutive years</td>
<td>For low-income households experiencing short-term financial crisis or unforseen emergency.</td>
</tr>
<tr>
<td><strong>New South Wales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Income Household Rebate</td>
<td>CPCC, DVAPCC, DVA Gold Card, HCC</td>
<td>$258.50 pa</td>
<td>Must be a New South Wales resident.</td>
</tr>
<tr>
<td>Family Energy Rebate</td>
<td>Eligible and received Family Tax Benefit A or B any</td>
<td>$150</td>
<td>Must be a New South Wales resident.</td>
</tr>
<tr>
<td>Concession</td>
<td>Eligibility</td>
<td>Value</td>
<td>Notes</td>
</tr>
<tr>
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<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Queensland</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concession</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>time during the 2014-15 financial year</td>
<td></td>
<td>$165 for on-supplied customers</td>
<td></td>
</tr>
<tr>
<td>Medical Energy Rebate</td>
<td>CPCC, DVAPCC, DVA Gold Card, HCC</td>
<td>$258.50 pa</td>
<td>Cannot regulate body temperature and must be New South Wales resident.</td>
</tr>
<tr>
<td>Life Support Rebate</td>
<td>Based on qualifying medical condition.</td>
<td>Varies depending on the equipment</td>
<td>$32.85 – 1120.55 pa</td>
</tr>
<tr>
<td>Energy Accounts Payment Assistance Scheme</td>
<td>Community welfare organisations assess eligibility.</td>
<td>Operates through a voucher system (each voucher worth $50) for crediting bill</td>
<td>For households experiencing short-term financial crisis or unforeseen emergency.</td>
</tr>
<tr>
<td>Victoria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Electricity Concession</td>
<td>CPCC, DVA Gold Card, HCC</td>
<td>17.5% off bill</td>
<td>Not paid on first $171.60 of bill for those receiving compensation for energy costs from the Commonwealth government.</td>
</tr>
<tr>
<td>Excess Electricity Concession</td>
<td>CPCC, DVA Gold Card, HCC</td>
<td>17.5% off energy consumed above $2,882 pa</td>
<td>Recipients of Life Support and Medical Cooling Concessions are exempt and do not need to apply to receive this concession.</td>
</tr>
<tr>
<td>Controlled Load Electricity Concession</td>
<td>CPCC, DVA Gold Card, HCC,</td>
<td>13% discount on usage (consumption) charge</td>
<td>Discount only on controlled load portion of bill.</td>
</tr>
<tr>
<td>Medical Cooling Concession</td>
<td>CPCC, DVA Gold Card, HCC</td>
<td>17.5 % discount on summer electricity costs</td>
<td>Concession is available from 1 November to 30 April each year.</td>
</tr>
<tr>
<td>Life Support</td>
<td>CPCC, DVA Gold Card, HCC</td>
<td>Equivalent to the cost of 1,880 kilowatt hours of electricity.</td>
<td>Plus an annual home dialysis patient payment of $2,024 for haemodialysis and $768 for peritoneal dialysis.</td>
</tr>
<tr>
<td>Non-mains Energy Concession</td>
<td>CPCC, DVA Gold Card, HCC</td>
<td>Tiered rebate depending on amount of non-mains energy purchased.</td>
<td>For those utilising alternative sources of fuel.</td>
</tr>
<tr>
<td>$46 - $508</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity Transfer Fee</td>
<td>CPCC, DVA Gold Card, HCC</td>
<td>Relevant fee</td>
<td>Full waiver of fee when change of occupancy at a property.</td>
</tr>
<tr>
<td>Service to Property Charge Concession</td>
<td>CPCC, DVA Gold Card, HCC</td>
<td>Applied when cost of electricity used is less than the fixed (service) charge. The charge is reduced to the same price as the usage (consumption) charge.</td>
<td>A reduction on the fixed (supply) charge for concession households with low consumption.</td>
</tr>
<tr>
<td>Utility Relief Grant Scheme (Mains)</td>
<td>CPCC, DVA Gold Card, HCC</td>
<td>Capped at six months’ worth of usage, up to a maximum of $500</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix C: Summary of jurisdictional electricity schemes 2015-16

<table>
<thead>
<tr>
<th>Concession</th>
<th>Eligibility</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utility Relief Grant Scheme (Non-mains)</td>
<td>CPCC, DVA Gold Card, HCC Account holders without a concession card registered with their retailer’s hardship program and are part of a low-income household with an outstanding utility debt can apply May also be provided to those who do not have a non-mains debt, but are unable to afford their next non-mains supply load</td>
<td>Capped at six months’ worth of usage, up to a maximum of $500</td>
<td>For non-mains fuels</td>
</tr>
</tbody>
</table>

### South Australia

<table>
<thead>
<tr>
<th>Concession</th>
<th>Eligibility</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Bill Concession</td>
<td>CPCC, DVA Gold card, LIHCC, Commonwealth Seniors HC, State Concession Card, or an eligible Centrelink payment</td>
<td>Up to $215 pa</td>
<td>To cover both electricity and gas payments.</td>
</tr>
<tr>
<td>Medical Heating and Cooling Concession</td>
<td>CPCC, DVA Gold Card, LIHCC, Commonwealth Seniors HC, State Concession Card, or an eligible Centrelink payment. Based on qualifying medical condition</td>
<td>$215 pa</td>
<td>Must be South Australian resident.</td>
</tr>
<tr>
<td>Home Dialysis Electricity Concession</td>
<td>Any person undergoing dialysis treatment at home as long as approved by a SA Health Practitioner</td>
<td>$165 pa</td>
<td></td>
</tr>
<tr>
<td>Residential Park Resident Concessions</td>
<td>CPCC, DVA Gold Card, LIHCC, Seniors Card, Commonwealth Seniors HC, State Concession Card, or an eligible Centrelink payment</td>
<td>Varies $335 - $700</td>
<td>Living in a residential or caravan park may be eligible for a single combined energy and water concession.</td>
</tr>
</tbody>
</table>

### Tasmania

<table>
<thead>
<tr>
<th>Concession</th>
<th>Eligibility</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Electricity Concession</td>
<td>CPCC, DVAPCC, HCC, ImmiCard (Bridging Visa E), Tasmanian Concession Card</td>
<td>$467.79 pa</td>
<td></td>
</tr>
<tr>
<td>Heating Allowance</td>
<td>CPCC, DVAPCC Single pensioner must not have more than $1,750 in cash assets and married/defacto pensioners not more than $2,750</td>
<td>$56 pa</td>
<td>Payments of $28 made in May and September</td>
</tr>
<tr>
<td>Medical Cooling or Heating Concession</td>
<td>Based on qualifying medical condition</td>
<td>$140.11 pa</td>
<td></td>
</tr>
<tr>
<td>Life Support Concession</td>
<td>Based on qualifying medical condition and equipment</td>
<td>Varies depending on equipment</td>
<td></td>
</tr>
<tr>
<td>Concession</td>
<td>Eligibility</td>
<td>Value</td>
<td>Notes</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>--------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Australian Capital Territory</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy Concession</td>
<td>CPCC, HCC, DVAPCC</td>
<td>$338.21 pa</td>
<td>Covers both electricity and natural gas on principal place of residence only.</td>
</tr>
<tr>
<td>Utility Concession</td>
<td>CPCC, HCC, DVAPCC</td>
<td>$88.25 pa (combined with above $426.46)</td>
<td>Added to existing energy concession (above)</td>
</tr>
<tr>
<td>Medical Cooling and Heating Rebate</td>
<td>CPCC, DVAPCC, DVA Gold Card, HCC</td>
<td>$121.87 pa</td>
<td>Sub category of the Life Support Rebate</td>
</tr>
<tr>
<td>Life Support Rebate</td>
<td>Determined by energy provider and based on qualifying medical condition</td>
<td>$121.87 pa (Origin)</td>
<td></td>
</tr>
<tr>
<td><strong>Western Australia</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy Assistance Payment</td>
<td>CPCC, DVAPCC, DVA Gold Card, HCC</td>
<td>$227.14 pa</td>
<td>Previously known as Cost Of Living Assistance Payment.</td>
</tr>
<tr>
<td>Dependent Child Rate</td>
<td>CPCC, DVAPCC, DVA Gold Card, HCC</td>
<td>$276.16 (1 child)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$348.54 (2 children)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$420.92 (3 children)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$493.26 (4 children)</td>
<td></td>
</tr>
<tr>
<td>Air-conditioning rebate</td>
<td>CPCC, Commonwealth Seniors HC</td>
<td>$51.41 per month</td>
<td>Paid to seniors living in hottest parts of WA.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(number of months paid depends on location)</td>
<td></td>
</tr>
<tr>
<td>Thermoregulatory Dysfunction Energy Subsidy</td>
<td>CPCC, DVAPCC, HCC, Health Care Interim Voucher</td>
<td>$620 pa</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Based on qualifying medical condition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life Support Equipment Energy Subsidy</td>
<td>CPCC, DVAPCC, HCC, Health Care Interim Voucher</td>
<td>Varies depending on equipment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Based on qualifying medical condition and equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$44 - $1,131 pa</td>
<td></td>
</tr>
<tr>
<td>Account Establishment Fee Rebate</td>
<td>CPCC, Commonwealth Seniors HC</td>
<td>$33.80</td>
<td>Covers the cost of establishing a new account</td>
</tr>
<tr>
<td>Reduced Meter Test Fee</td>
<td>CPCC, DVAPCC, DVA Gold Card, HCC</td>
<td>Standard meter testing fee: $156.55</td>
<td>Concession card holders are eligible for a reduced meter test fee if an electricity meter is</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reduced meter testing fee: $144</td>
<td>believed to be faulty or inaccurate. Meter test fee if refunded if found to be faulty.</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td>Energy Concession Extension Scheme</td>
<td>All eligible households (see individual eligibility above) that receive</td>
<td>See individual concession rates above</td>
<td>Applies to: Energy Assistance Payment; Dependent Child Rebate; and Air-conditioning Rebate.</td>
</tr>
<tr>
<td></td>
<td>electricity through on-selling.</td>
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</tr>
</tbody>
</table>
## Appendix C: Summary of jurisdictional electricity schemes 2015-16

<table>
<thead>
<tr>
<th>Concession</th>
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<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardship Utilities Grant Scheme</td>
<td>Must be: Residential customer; Assessed by retailer as experiencing hardship; and Unable to pay current bill or been disconnected</td>
<td>Three types of grants depending on location: Normal $538 - $891 Exceptional circumstances: $859 - $1,283 Additional: $245 - $408</td>
<td>To assist with financial difficulties in paying utility bills.</td>
</tr>
<tr>
<td>Northern Territory</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pensioner and Carer Concession Scheme</td>
<td>CPCC, DVAPCC, DVA Gold Card, DVA Commonwealth Seniors HC, HCC, Commonwealth Seniors HC</td>
<td>Depending on accounts selected for support</td>
<td>Provides financial subsidies to eligible members for electricity, water, sewerage, council rates, garbage rates, travel, spectacles, motor vehicle registration, urban public bus travel and drivers licence renewals.</td>
</tr>
<tr>
<td>Commonwealth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilities Allowance</td>
<td>Disability Support Pension, Partner Allowance or Widow Allowance</td>
<td>Single customers - $594.40 per year Couple combined - $594.40 per year</td>
<td>Assistance to pay bills.</td>
</tr>
</tbody>
</table>
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*Electricity Competition and Protection Legislation Amendment (Postponement) Regulation 2015 (Qld)*

*National Electricity (South Australia) Act 1996 (SA)*

*National Energy Retail Law (Queensland) Act 2014 (Qld)*