SUBMISSION

Queensland Productivity Commission
Electricity Pricing Inquiry
Draft Report

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1. Executive Summary

The Queensland Branch of the Electrical Trades Union (ETU) welcomes the opportunity to respond to the Queensland Productivity Commission (QPC) Draft Report to its Electricity Pricing Inquiry.

Energy is essential to the modern standard of living in Queensland and without a safe, sustainable and secure supply of affordable energy we cannot fuel our cars, ride busses or trains, cook dinner, cool drinks, wash our clothes, surf the internet, watch television, recharge mobile phones, laptops or use our computers.

However, over recent years we have seen electricity prices increase by large, unsustainable amounts to the point where it has become the most significant cost of living expenses for private consumers, and one of the largest ongoing expenses for businesses. The hyper-inflation of electricity prices has sparked significant regulatory and policy reform as regulators and governments have reacted.

Since 2006–07 Queensland's electricity prices have increased in real terms by 87 per cent. As prices have continued to rise significantly, transmission and distribution network companies have enjoyed huge increases to revenues and profits.

The biggest contributor, in our view, to high electricity prices has been the ineffective regulatory environment within the NEM that has resulted in network businesses being able to consistently achieve profits that are far in excess of those allowed for in AER determinations. Linked to that is the role that forecast modelling by agencies such as the AER, AEMO and AEMC play in decisions of network businesses, generators and new entrants.

The current oversupply of electricity, along with perceived over investment in networks can be linked back to demand projections from governance bodies that were wildly inaccurate. Coupled with a regulatory environment that did not allow for appropriate adjustments, it has contributed significantly to the price outcome problems that are currently besetting energy regulators and governments.

While it is not possible to accurately predict the future, important data such as demand projections should not be totally wrong, and there needs to be sufficient flexibility in the regulatory process to allow adjustments that protect consumers from having to foot the bill for bloated AER determinations.

Much has been made of network costs as the main culprit of steep increases to residential electricity prices. In particular, the term ‘gold plated’ networks was coined in reference to publically owned transmission and distribution network businesses that (allegedly) overinvested in network capital expenditure in comparison to private networks.

This has led to a barrage of calls from various industry sectors that those remaining public electricity networks, such as those in Queensland and New South Wales, should be privatised.

We do not agree that privatisation of the energy sector is the best way forward, not least of which is because privatisation does not lead to lower retail energy prices. In fact, the energy sector policies that delivered hyper-inflation of consumer electricity prices were largely a result of national competition based reforms that trumpeted privatisation.

While the idea of the federal government becoming involved in retail price setting is no doubt a political anathema, perhaps is time to examine the concept of nationally harmonised retail electricity tariffs and that consideration should be given, at a COAG level, to examining ways to reduce and streamline the regulatory arrangements between federal and state and territory energy jurisdictions. There is some duplication of roles and resources between state and federal regulatory agencies and recommend examining reform options at both levels.

2. AER Determinations and the Performance of Network Businesses

In a theoretically ideal competitive market, prices perform at several distinct functions. Prices provide a signal to consumers about the social cost of the product they are consuming. Consumers will buy the product if, and only if, its value to them exceeds the price, which represents the value of the resources used to produce it.

Conversely, prices provide a signal to producers about the value of their product. Firms will produce more (or less) if the price is greater (or less) than their cost of additional production.

In addition, prices provide a signal to firms on whether to invest in additional production capacity. If prices are high, and expected to remain so for some time, the industry will attract new investment. If prices are low, there will be no new investment and existing capacity will be scrapped or allowed to run down. Finally, competitive prices ensure that, in the long run, businesses earn the market rate of return on the capital they have invested, no more and no less.

The NEM attempts to reproduce all of these outcomes but fails. There are several critical problems.

First, there are problems in relation to network infrastructure. The physical network is a natural monopoly, which means the market is best served by a single set of poles and wires.

Of course, in the absence of regulation, such a natural monopoly could potentially will charge prices that are too high. Consumers will get less than they should at a higher price, profits will be excessive and investment will be distorted.

These problems can be reduced, though not eliminated completely, by comprehensive price regulation. But when privatised firms are regulated in this way, their primary incentive can be to ‘game’ the system to secure higher returns. This often entails delaying investment (a pattern seen with Telstra on broadband).

Secondly, electricity networks are highly capital-intensive. As a result, the cost of electricity is significantly impacted by the capital value of the network and the rate of

return earned by its owners. In the NEM era, public electricity enterprises funded their investment by issuing bonds, normally at a small premium to the government bond rate. In some cases, governments guaranteed these bonds. However, the primary reason for the low rate of return demanded by investors is that, under normal conditions, the risk of these investments is very low.

The risk associated with the regulated monopoly components of the industry, transmission and distribution, remained low. The standard method of regulation involved fixing allowable revenue based on an estimate of the efficient costs of operation.

The dominant component of efficient costs was the need for a return to capital.

3. Network Costs

In recent years much has been made of network costs as the main culprit of steep increases to residential electricity prices. In particular, the term 'gold plated' networks was coined in reference to publically owned transmission and distribution network businesses that, allegedly, overinvested in network capital expenditure in comparison to private networks.

We note the Draft Report states:

"Over $22 billion was spent on electricity network infrastructure between 2005–06 and 2014–15 to meet higher reliability standards and to accommodate increasing peak demand, which has led to concerns that there has been over-capitalisation of the network infrastructure."

"Escalating network costs have been the primary driver of electricity price increases over the last decade, accounting for 82 per cent of the 87 per cent escalation in electricity prices."

"The Queensland Government, as the continuing owner of the electricity transmission and distribution networks, has a significant role to play in ensuring that these businesses have not only strong oversight but also the incentives to pursue further operating and capital expenditure efficiencies."

We believe that to focus solely on network costs misses the main point, which is retail costs - what consumers are paying for their electricity.

With respect to the claim that network costs represent 82% of the 87% of increase over the last decade we call on the Commission to justify this claim by providing full details on the methodology on how this figure was calculated.

Inherent in the statement is the claim that only 6% of increase represents the increased cost of generation (including carbon pricing), the introduction of the Solar Bonus Scheme, and rising retail costs – including the introduction of full retail contestability – *combined.*

Such as claim is not only counter intuitive, it is so far out of step with the plethora of other price modelling that is borders on non-sensical. It needs to be fully justified. Failing that, it is disappointing that such an irresponsible ambit claim has been included in the Draft Report, and it should be immediately discarded from future editions.

In that respect Queensland electricity prices compare favourably with other states. Indeed, the Draft Report states:

"Queensland's average electricity prices are still amongst the lowest of the major states."

This finding is the latest to confirm our long held view that while network costs are a significant portion of the overall cost of electricity, the only true consumer measure is retail price.

We find it irksome when it is suggested that network costs are more efficient in a privatised jurisdiction like Victoria compared to those in NSW or QLD, when the actual retail prices are equal to or higher (eg South Australia).

A report[1] used by the NSW Government to support its push for privatisation has argued that the component of prices attributable to the network businesses is lower in Victoria than in NSW, and suggests that Victorian network prices are lower today (after excluding inflation) than they were in 1996.

[1] Ernst & Young (2014), 'Electricity network services: Long-term trends in prices and costs'.

However, there are a number of issues that belie the fact that it is not a like-for-like analysis. The NSW Government report excludes smart metering (Advanced Metering Infrastructure 'AMI") costs in Victoria. Therefore, metering costs should also have been excluded from network costs in NSW, or AMI costs included in Victoria. They weren't. The analysis failed to ensure an adjusted comparison of the costs associated with different entities in different states. This is an important factor that is highlighted by the recent AER determination on Victorian AMI charges, which is examined in further detail later in the submission.

Also, the period of time used for the comparison carried substantial implications because network costs in Victoria began at a much higher base for the initial year of analysis, whereas NSW was achieving substantially lower network costs in 1996.

Contrary to allegations that privatisation has led to increased efficiency in network costs, what the data actually shows is that between 1996 and roughly the start of the last regulatory control period (2009), there was a convergence in network prices between the states.

Importantly, most network cost comparisons make no attempt to take into account the physical span of the transmission and distribution networks in state owned jurisdictions such as New South Wales (NSW) and Queensland (QLD). This is a significant flaw in network cost comparisons. All else being equal, one would expect that the costs of NSW and QLD networks would be higher than Victoria's due to the greater difficulty in maintaining a geographically dispersed network as well as the sheer cost of building longer lines and more substations.

With reference to earlier remarks, the root cause of problems associated with network costs lie with the gaps in the current AER regulatory environment that provides incentives for network businesses, regardless of whether public or private, to pursue aggressive capital works investment to increase their Regulated Asset Bases.

We believe it is of vital importance that this is made clear in the final report.

4. Impact of Embedded Generation

Business and residential electricity consumers have responded to increased prices, through energy efficiency, demand management and the installation of solar PV.

As a result average electricity demand is falling, at the same time, Queensland's peak electricity demand continues to grow, although not at the rates experienced in the late 2000s.

The Draft Report states that modelling of the Queensland Government's policy of a 50 per cent target for renewable generation by 2030 suggests an average increase in retail electricity prices of 0.5 per cent for households and 0.3 percent for industry, and a reduction of 0.7 per cent for commercial customers for the period 2015–16 to 2034-35. There are, however, economic implications for Queensland of 'going it alone' on extended renewable targets in the absence of similar action by other states or nationally. The Draft Report further predicts that small-scale solar PV will achieve a 3000 megawatt (MW) capacity target by 2022 without any additional incentives.

If consumers are producing more of their own energy or needing to buy less because of energy saving then they will reasonably expect to pay less for grid delivered electricity. The use of solar and energy efficiency in effect represent new forms of competition for grid delivered electricity – the entry of new forms of competition into a market would normally be expected to impact prices. The impact of falling demand for grid delivered electricity may be mitigated if there is new demand for electricity – e.g. from electric vehicles, or greater use of off – peak water heating (to back up solar). But consumers will not tolerate charges increasing or staying the same as their usage of networks declines - there therefore has to be some serious thought into how to manage any decline in the use of existing assets and the timescale over which this should be managed.

Otherwise we may see more and more consumers disconnecting completely if they can to rely on their own solar or other generation source. The development and reduced costs of storage will make this more and more possible. Although it is likely

that most customers will want the security of connection for the foreseeable future even this could change longer term, particularly if charges remain high.

Falling demand for grid delivered electricity need not be all bad for established network businesses. There are many new business opportunities (e.g. solar, demand side management, automatic control of large loads such as air conditioning) which some are already embracing. New demands from electric vehicles could also help to keep assets more fully occupied.

We believe that there needs to be more work done to facilitate the integration of future embedded generation technologies with traditional centralised networks. Particularly within the context of recent progress to the affordability and efficiency of battery storage technologies.

5. Forecast Data Modelling

Much has also been made recently of the oversupply of generation in the National Electricity Market, and while that is certainly a consideration when it comes to the long term security of supply of our generation sector, the latest Bureau of Resources and Energy Economics data confirms that final energy consumption (energy consumed by end-use sectors excluding energy used in conversion activities such as electricity generation) actually rose by 2 per cent in 2012–13. So while there might be a decline in the overall amount of energy produced, the rate of energy consumption is still increasing.

The reason have an oversupply of generation capacity is a result of the ongoing pendulum effect of swinging between too much generation capacity and too little, because of the reluctance of the free market to commercially invest in new generation until there is a period of projected shortage, at which point the market delivers a glut a new capacity as investors rush to build new capacity, which is the current point in the cycle.

Central to this is the role that forecast modelling by agencies such as the AER, AEMO and AEMC play in decisions of network businesses, generators and new entrants.

The current oversupply of electricity, along with perceived over investment in networks can be linked back to demand projections from NEM governance bodies that were wildly inaccurate. Coupled with a regulatory environment that did allow for appropriate adjustments, it has contributed significantly to the problems that are currently besetting energy regulators and governments.

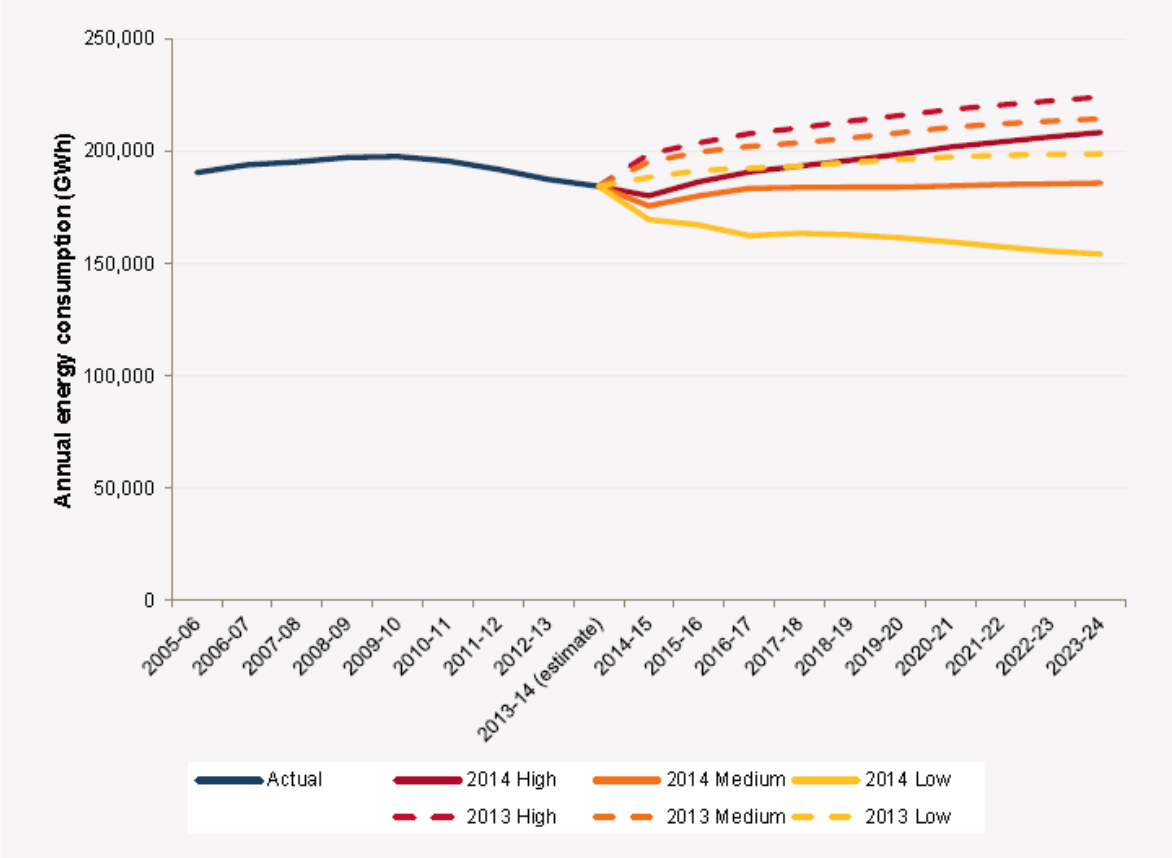
Compare the data in the tables below, taken from the Australian Energy Market Operator (AEMO) Electricity Statement of Opportunity 2010 and 2014 respectively.

2010 ESOO NEM Projections

Financial year	Actual	Medium growth	High growth	Low growth
2004/05	186,246			
2005/06	191,598			
2006/07	194,107			
2007/08	195,376			
2008/09	197,187			
2009/10 (estimate)	198,055			
2010/11		205,034	208,081	202,215
2011/12		211,405	217,566	204,929
2012/13		216,623	225,197	207,510
2013/14		220,167	231,613	209,570
2014/15		224,961	239,732	212,139
2015/16		230,248	249,022	214,903
2016/17		234,455	256,070	216,615
2017/18		237,935	261,925	218,923
2018/19		241,661	273,780	220,691
2019/20		246,584	281,915	224,000
Average annual growth	1.2%	2.1%	3.4%	1.1%

(Source – AEMO 2010)

2014 ESOO NEM Projections



(Source – AEMO 2014)

The difference between the projected demand is stark, and sobering particularly when you consider how influential the ESOO data is for NEM forward planning of both regulators and participants alike.

While it is not possible to accurately predict the future, and sole responsibility does not lime with the AER, AEMO or AEMC, important data such as demand projections should not be so dramatically wrong, and there need to be sufficient flexibility in the regulatory process to allow adjustments that protect consumers from having to foot the bill of bad investment decisions via bloated AER determinations.

6. Privatisation

We note that the Draft Report is neutral in relation to models of ownership of electricity assets, presumably as has predominately been a political issue over modern years.

Nevertheless, it would appear from recent media reports and comments on the public record from past and present politicians that there is some discourse around potential asset sales or leases for Queensland public energy assets. Given the current public discourse and the links that are consistently made between public vs private ownership and prices, we believe is appropriate to comment as it falls well within the Commission's terms of reference for this inquiry.

Privatisation is often justified that it will create greater efficiencies through competition and lead to lower consumer prices and greater choice. However, the ETU rejects these assertions completely.

Privatisation of state of territory electricity assets such as power generators, high voltage transmission line and distribution lines are not in the short or long term economic interests of Australia and will have a detrimental effect on service standards and higher prices. It also means that reliable, universal electric services at a reasonable rate are replaced by a 'consumer choice' of a narrow supply of retailers that all essentially deliver the same product.

There are good reasons for government owned and operated services and enterprises, particularly those that are essential services. Government is not hampered by having to make a return to shareholders as a priority. Government is more likely to better look after the needs of consumers in remote areas as the less profitable areas of the business can be cross subsidised by the more profitable areas in higher population areas. Once Government sells its stake in the business, its ability to influence outcomes in the public interest is severely reduced as is its capacity to regulate market behaviour.

Privatisation as energy policy in government goes far beyond that of misplaced confidence in a particular ideology, there are numerous independent reports that have analysed privatisation parts of Australia's energy sector and shown that in almost every case it has failed to deliver on its promises and led to worse economic and social outcomes compared to public ownership.

In 2013 prominent Australian economist Professor John Quiggin examined of twenty years of electricity privatisation reform concluding that it has failed to deliver promised benefits for consumers. The independent report, "Electricity Privatisation in Australia: A Record of Failure", found that fiscal analysis did not support claims that there were any long-term benefits to governments or consumers from the sale (or lease) of energy assets.

Professor Quiggin's research examined the impact of changes since the 1990s based on free market and competition economic theories. The analysis found that, after a marked fall in real electricity prices across Australia from the 1950s until the mid-1990s, privatisation and the introduction of a National Electricity Market led to a reversal in that trend. The research also revealed that:

- Price rises have been highest in States with privatised electricity networks;
- Customer dissatisfaction jumped, with complaints to the energy ombudsman in privatised States leaping from 500 per year to over 50,000;
- Resources have been diverted away from operational functions to management and marketing, resulting in higher costs and poorer service;
- Reliability has declined across a wide range of measures in privatised Victoria;
- promised increases to investment efficiency have not occurred;
- real labour productivity has reduced as employment and training of tradespeople was gutted and numbers of managerial and sales staff exploded;
- Private owners are receiving unjustifiably high rates of return based on the low investment risk; and

- Customer bills in privatised states include the cost of almost 10 per cent per annum interest on the corporate owners' debt, compared to government borrowing costs of close to three per cent.

Privatisation, corporatisation and the creation of electricity markets were supposed to give consumers lower prices and more choice, promote efficiency and reliability, and drive better investment decisions but after twenty years the evidence is that none of these promises improvements have been delivered. Prices have risen dramatically, with the removal of the secure low-cost supply consumers previously enjoyed, and its replacement with a bewildering array of offers, all at costs inflated by a huge expansion in marketing.

Privatisation has produced no benefits to consumers, but has resulted in large financial losses to the public and we urge the Commission's final report to reflect this, or at the very minimum to assert that public ownership does place upward pressure on residential electricity prices.

7. Smart Meters

The AER refers to its 2012 'Power of Choice' reforms as a current priority[2] and a lists enabling technology such as smart meters as major part of managing the future transformation of the energy sector by communicating information on household electricity consumption in real time and provide that information to both the consumer and the electricity provider for monitoring and billing purposes. This should allow consumers to have unprecedented levels of choice over when they chose to use electricity and thereby save money on power bills whilst simultaneously contributing to demand side management.

Smart Meters are an integral prerequisite for the introduction of Time of Use Tariffs and a national Smart Grid and have been in place in Victoria for several years now

[2] AER, Submission to Energy White Paper, February 2014.

and the results have been mixed. While they do provide excellent data on usage patterns, when it comes to costs, the reality is not living up to the promise.

Charges associated with Smart Meters are billed in a similar way as equipment associated with a household's electricity supply is currently billed. Some retailers in Victoria have opted to represent the cost increase associated with smart metres as a single line item. Others, like AGL, have opted to bundle it up as part of the general service charges.

In December 2014, the AER published its decision on the Victorian distribution network service providers 2015 advanced metering infrastructure charges from 1 January to 31 December 2015[3], which allows $111.4 million of excess expenditure associated with smart meters to be passed onto smart meter customers across three of Victoria's distributors.

Figure 6 – AER Approved Advanced Metering Expenditure Excess ($m, real 2013)

AMI expenditure excesses 2013	Jemena	United Energy	AusNet Services
Excess sought	25.7	53.7	70.2
Excess approved	21.0	43.0	47.4
Excess rejected	4.7	10.7	22.7
Excess rejected (per cent)	18	20	32

Source – AER

While not every household will be subject to an increase, those that do are estimated to be subject to additional charges of $109.40 to $226.30, plus GST, for the most common type of smart meter, depending on where consumers live. This represents an increase of up to 28 per cent higher than the previous year.

Jemena's charge for 2015 was $226.30, up 17 per cent, AusNet Service's charge is $205.50, up 28 per cent, and United Energy's charge is $154.50, or 9 per cent more.

[3] http://www.aer.gov.au/node/29217

CitiPower's $115.90 fee is down 60c, and Powercor's $109.40 charge is 5 per cent lower.

The companies that overspent cited stalled installations caused by the then Liberal Government's project review, public resistance to the meters' introduction, shortages of installers, and the delayed introduction of time-of-use electricity tariffs as reasons for smart meter expenditure overruns.

Overall, there seems to be a perverse outcome where smart metering technology is actually costing consumers more than they are saving, with network companies (as usual) profiting. In Victoria, the peak period on weekdays is no less than every hour that falls between 7am and 11pm. When a "peak period" covers what many residents would view as strangely synchronous to their own waking hours, serious questions need to be asked as to whether the smart grid is actually being used as a tool to manage peaks in energy demand, or whether the net has been cast so wide as to capture the maximum amount of revenue possible for retailers.

While Smart Meters and Time of Use tariffs and the establishment of Smart Grids have the potential to bestow numerous benefits and efficiencies, the devil is in the detail and the implementation. If such significant changes to the supply and consumption of electricity are not effectively implemented the benefits will be lost, and we are seeing examples of this currently through the current AER AMI metering determinations.

While technically not part of a residential electricity price, we urge the QPC to consider and make comment in its final report on the potential impact that excessive charges associated with advanced metering that are allowable under the current regulatory environment may have on consumers.