



The Winners and Losers of the Monopoly Game

**How the Queensland Government profits from
Queensland's excessive electricity prices**

Hugh Grant, Executive Director, ResponseAbility

April 2018



1 Executive Summary

1.1 Background

Queensland's excessive electricity prices are presenting major hardship for residential consumers and destroying the international competitiveness of Queensland businesses.

In recent years, the Queensland community has become increasingly concerned with the levels of profits the Queensland Government is extracting from the Queensland government-owned monopoly electricity networks (Energex, Ergon Energy and Powerlink Queensland) and the extent to which those profits are driving Queensland's excessive electricity prices.

In response to pressure from the Queensland community, Queensland's political parties are proposing various policies aimed at reducing the Queensland electricity networks' excessive prices and profits.

This paper provides an analysis of the profits the Queensland Government is extracting from the Queensland networks and how those profits are driving Queensland's excessive electricity prices, outlining the policy and regulatory changes required to reduce the networks' prices and profits to efficient levels.

1.2 Queensland's Excessive Electricity Network Prices

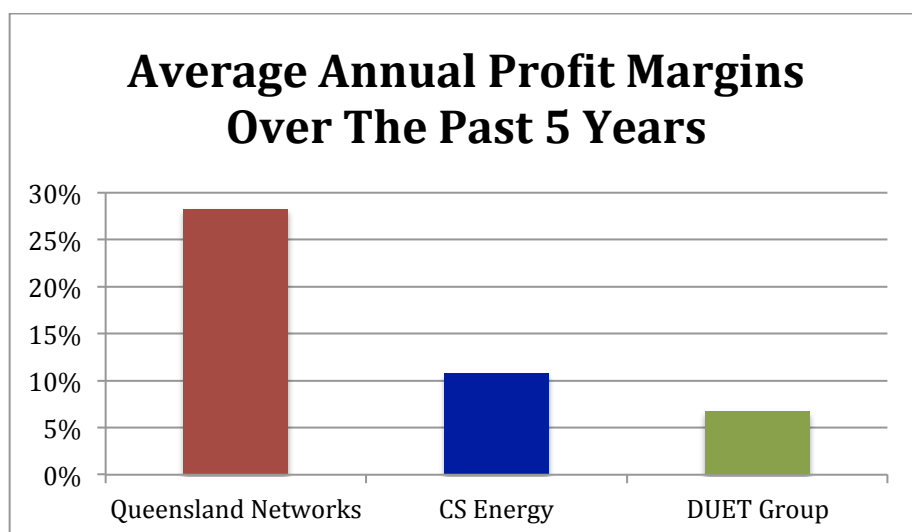
Review after review, inquiry after inquiry, has consistently concluded that the primary driver of Queensland's excessive electricity prices is the excessive prices of Queensland's monopoly electricity networks.

All of the reviews and inquiries have outlined that the Queensland networks' price increases over the past decade were unnecessary and have resulted from the networks exploiting deficiencies and loopholes in the national regulatory framework, gaming the national regulator (the Australian Energy Regulator (AER)) to secure revenue allowances of over twice the efficient levels.

Over the past decade, the Queensland networks' prices and profits have grown at the highest rates in Australia and the Queensland Government has realised extraordinary profits from the networks' overinvestment and inefficiencies.

1.3 The Queensland Networks' Extraordinary Profits

Over the past five years the Queensland networks achieved annual profit margins of up to 48%, with an average profit margin of 28.3%, equating to around 3-4 times the average profit margins realised by comparable energy businesses.



1.3.1 Comparison With The Queensland Government-Owned Generators' Profits

The Queensland Government's returns from the government-owned networks contrast sharply with its returns from the government-owned generators.

Unlike Queensland's monopoly networks, Queensland's government-owned generators operate in a competitive market that (until recently) has punished over-investment and inefficiency. As a result, Queensland's government-owned generators incurred significant losses over the past decade, requiring the Queensland Government to inject significant levels of equity to keep the businesses solvent.

By contrast, Queensland's government-owned networks have delivered very high profits in every year since they were corporatised in the 1990s. Rather than requiring equity injections, successive Queensland Governments have actually withdrawn equity from the networks and have frequently extracted income from the networks above the networks' levels of income generation.

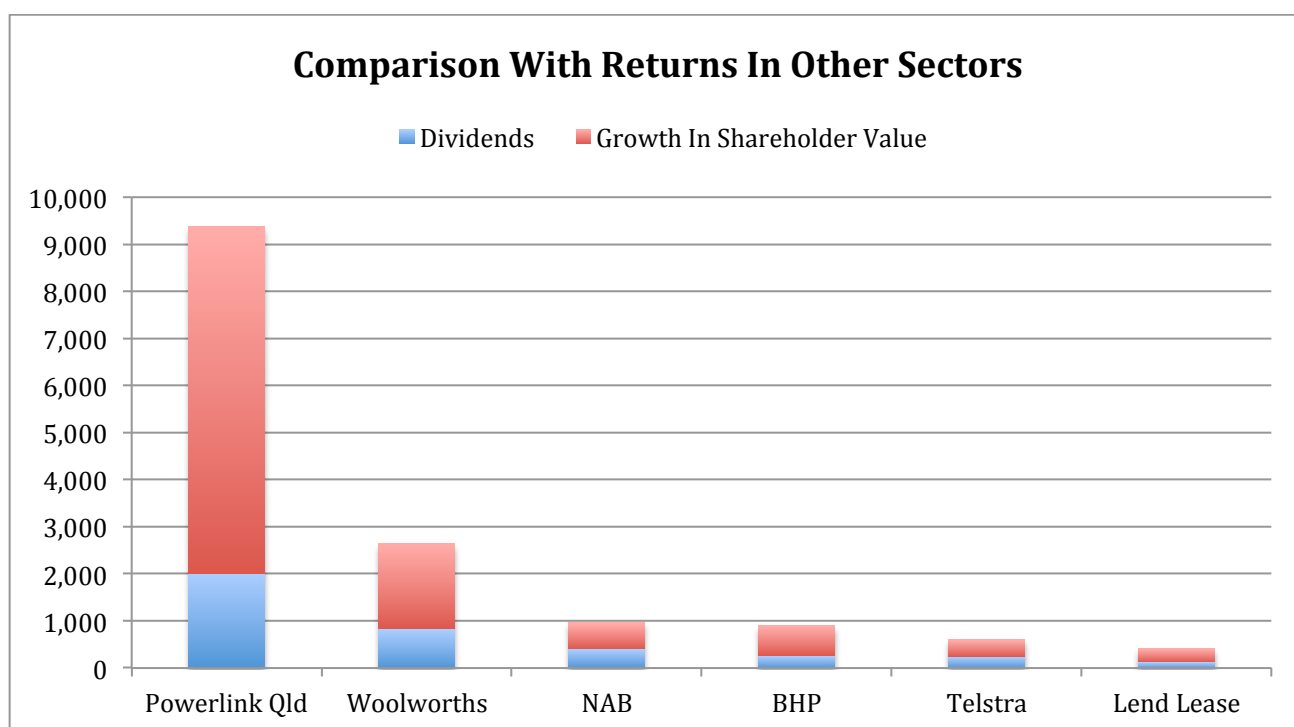
1.3.2 Comparisons With The Returns In Other Sectors

The Queensland networks' high profit margins are resulting in the Queensland Government realising long-term financial returns (return on equity) from the networks of many multiples of the returns being achieved in all other sectors of the Australian economy.

For example, over the 15-year period to 2014, the Queensland Government's returns from Powerlink Queensland amounted to:

- 23 times the returns achieved by the Australian construction sector (Lend Lease)
- 15.5 times the returns achieved by the Australian telecommunications sector (Telstra)
- 10.5 times the returns achieved by the Australian minerals and resources sector (BHP)
- 10 times the returns achieved by the Australian banking sector (NAB)
- 3.6 times the returns achieved by Australia's most profitable supermarket (Woolworths)

No ASX 100 stock came close to Powerlink's returns



Based on all of the available information, the profitability levels being realised by Queensland’s monopoly electricity networks are the highest of any electricity networks in the world.

Importantly, those returns are being realised despite Queensland’s electricity networks being amongst the most inefficient networks in Australia:

- Powerlink Queensland is the most inefficient transmission network in Australia
- Ergon Energy is the second least efficient distribution network in Australia

1.4 The Queensland Government’s Unsustainable Income Extractions From The Electricity Networks

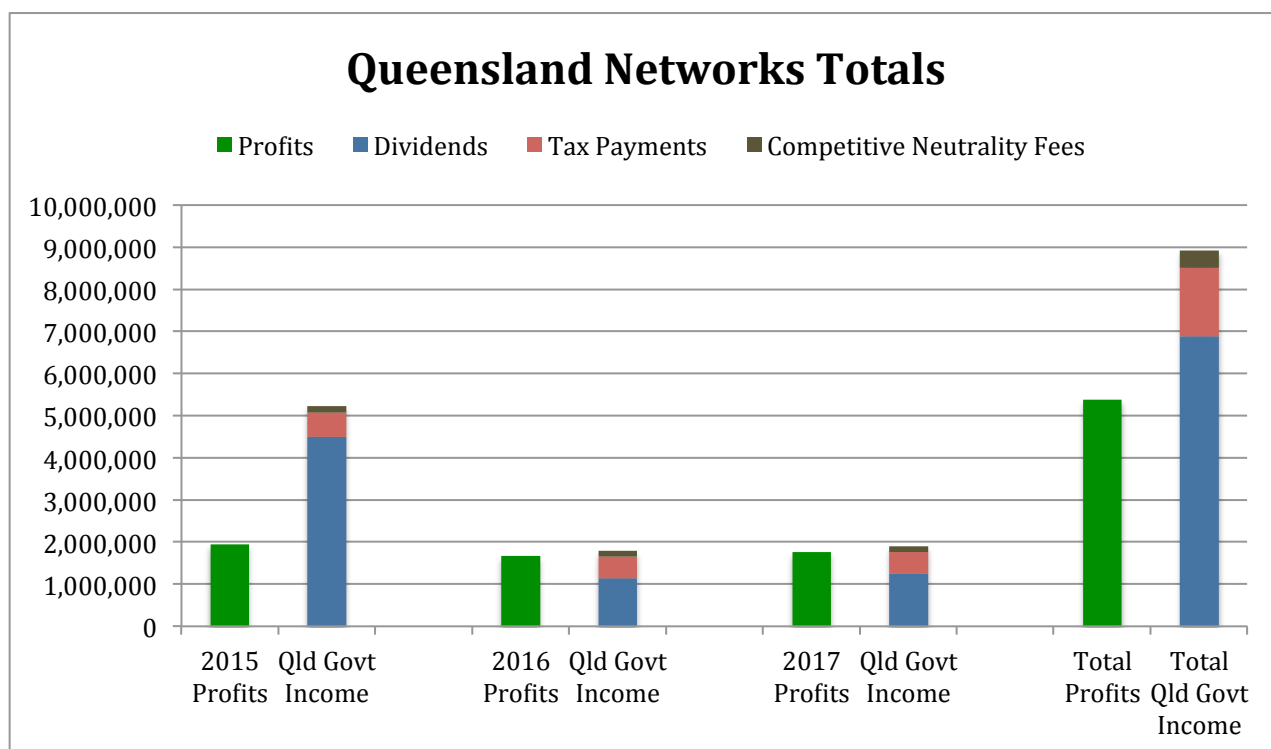
The Queensland Government extracts three sources of income from the Queensland electricity networks:

- **Dividend payments** – the Queensland networks pay dividends to the Queensland Government
- **Tax equivalent payments** – the networks are corporatised and pay “tax equivalent” payments to the Queensland government at the commonwealth corporate tax rate
- **Competitive neutrality fees** – the networks source their debt from the Queensland Government at interest rates below market rates. The Queensland Government charges the networks *competitive neutrality fees* to reflect the difference between the interest rates charged by the government and market interest rates

Despite the Queensland networks extraordinary profits, in every year over the past three years the Queensland Government extracted more income from the networks than the networks created.

Overall, over the past three years the Queensland Government extracted a total income of \$9 billion from the Queensland networks, equating to 167% of the networks’ total profits over the period.

Importantly, in 2014/15 the Queensland Government’s total income extractions amounted to 270% of the networks’ profits (617% of Powerlink Queensland’s profits, 230% of Ergon Energy’s profits and 214% of Energex’s profits).



1.5 The Queensland Government's Profits From The Networks' Charges

Over the past three years, for every dollar Queensland consumers paid in network charges, the Queensland Government collected 47 cents in profits – i.e. **the Queensland Government collected a 47% profit margin from the Queensland networks.**

As illustrated in the charts overleaf, this means that:

- For a Queensland household electricity bill with network charges of \$1,000, the Queensland Government's profits from the networks amounted to \$470
- For a Queensland small business bill with network charges of \$2,000, the Queensland Government's profits from the networks amounted to \$940
- For a large business user bill with network charges of \$200,000, the Queensland Government's profits from the networks amounted to \$94,000

1.6 The Transfer To National Network Regulation Has Been A Catastrophic Failure

The decision to transfer responsibility for the Queensland electricity networks' revenue regulation to the national regulatory framework in 2006 was based on promises that it would deliver more efficient prices and improve the networks' productivity levels.

However, rather than delivering those promised improvements, national regulation of the Queensland networks' revenues has been a catastrophic failure, resulting in:

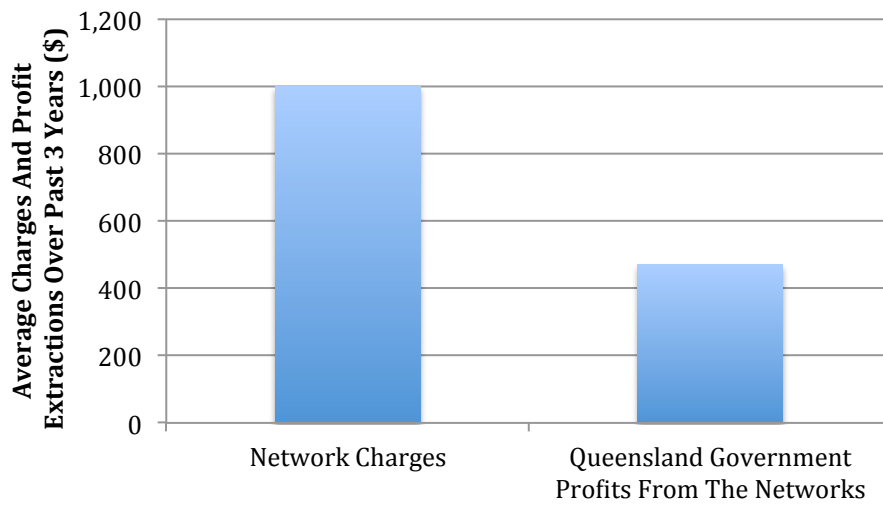
- A more than doubling of the Queensland networks' prices
- The Queensland networks achieving extraordinary profits of many multiples of the returns being achieved by ASX100 companies in all other industry sectors
- Extraordinary levels of over investment and gold plating – resulting in the Queensland networks' capital productivity levels being the lowest in Australia
- Extraordinary increases in the networks' operational costs - resulting in the Queensland networks' operational efficiency levels being the lowest in Australia

Although the deficiencies in the national regulatory framework apply to both publicly and privately owned networks, the state government owned networks have exploited the deficiencies and loopholes to a much higher degree than the privately owned networks.

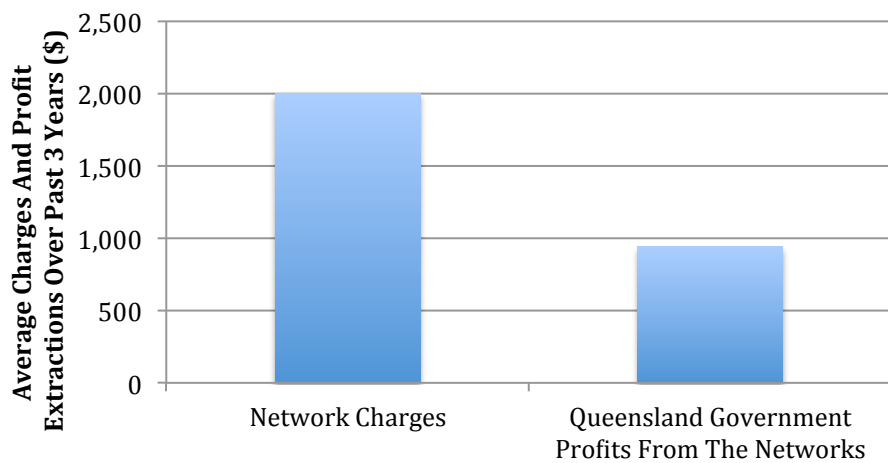
In essence, the national regulatory framework was designed for private ownership and has been unable to prevent government owned networks (with their access to low-cost finance) from exploiting the incentives for overinvestment and gold plating, and profiting from their inefficiencies.

As a result, the state government owned networks' prices are over twice the efficient level, whereas the privately owned networks' prices are typically around 30-40% above efficient levels.

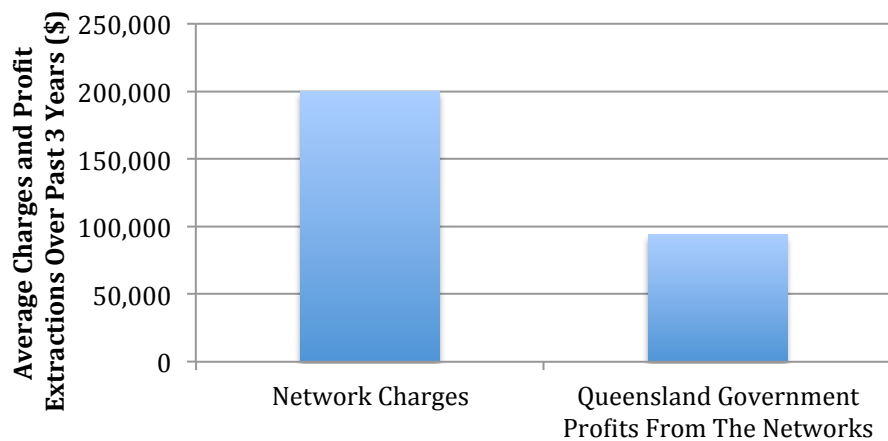
Queensland Household Bill



Queensland Small Business Bill



Queensland Large User Bill



1.7 The Queensland Networks' Gaming Of The National Regulator

The Queensland networks have systemically exploited various deficiencies and loopholes in the national regulatory framework, securing revenue allowances from the national regulator (the AER) over twice the efficient levels:

Profiting From Over-Investment and Gold Plating

The Queensland networks receive guaranteed returns on their regulatory valuations – their regulatory asset bases (RABs). Those returns drive the majority of the networks' revenues and prices.

Prior to transferring to national regulation, the regulatory rules required the regulator to *optimise* the networks' RAB valuations to reflect the efficient value of assets needed to provide the required services. That meant that if the networks invested in more capacity than required, the regulator was required to exclude the value of the excess capacity from the networks' RABs, thereby ensuring that consumers were not required to fund excess capacity or inefficient investments.

However, when the networks transferred to national regulation in 2006, the Queensland Government (and other state governments) insisted that major changes were made to the regulatory rules to prevent the regulator from optimising the networks' RABs and to ensure that the networks received guaranteed returns on all investments irrespective of their prudence or efficiency.

The removal of the regulator's RAB optimisation powers contrasts sharply with the regulatory rules in other jurisdictions in Australia and overseas. For example, the regulatory rules that apply to Australia's gas networks and to the Western Australian electricity networks have always required the regulator to optimise the networks' RABs.

As predicted by numerous stakeholders, the removal of RAB optimisation from the National Electricity Rules incentivised extraordinary levels of over-investment by the networks, particularly by the Queensland government-owned networks due to their lower borrowing costs and the additional pecuniary benefits the Queensland Government realises from the networks' over-investment.

The Queensland networks' levels of overinvestment were the highest in Australia and the Queensland Government is continuing to profit substantially from that over-investment, as the networks continue to receive guaranteed returns on under-utilised and redundant assets.

Profiting From Operational Inefficiencies

The Queensland networks are amongst the least efficient networks in the National Electricity Market (NEM).

- Powerlink Queensland is the most inefficient transmission network in the NEM
- Ergon Energy is the second least efficient distribution network in the NEM

The Queensland networks have managed to prevent the AER from properly applying benchmarking when setting their opex allowances, resulting in the AER setting their opex allowances on the basis of their historical costs, rather than efficient costs.

As a result, the Queensland networks' total opex allowances over their current 5-year regulatory periods are \$2.25 billion (\$450 million per annum) above the efficient level.

Profiting From Gaming The AER's Incentive Schemes

The Queensland networks have realised major windfall profits from gaming the AER's incentive schemes, by taking advantage of information asymmetries and negotiating incentive scheme targets well above the efficient levels.

1.8 Successive Queensland Governments Have Enabled The Queensland Networks To Exploit The National Regulatory Framework

Since transferring to national regulation, the Queensland networks' prices and profits have grown at the highest rates in Australia.

Successive Queensland Governments have consistently deflected the blame for the networks' price increases to the "independent national regulator"- i.e. they have conveniently blamed the Australian Energy regulator (AER) for the networks' price increases.

However, the national regulatory framework and the AER's regulatory powers are actually controlled by the state and territory governments through the *COAG Energy Council*.

The truth is that successive Queensland Governments have demonstrably failed to balance their conflicting roles of network owner and regulatory rule maker. The addiction to the networks' extraordinary profits has severely compromised the Queensland Government's approach to network regulation for many years.

Successive Queensland Governments have consistently chosen short-term profits over effective regulation, by:

- Constraining the AER's powers and ensuring that the regulatory rules have a strong bias towards the networks' financial interests at the expense of consumers' interests; whilst
- Ignoring the consequences of inflicting excessive prices on the Queensland community and the Queensland economy

It is therefore not surprising that the Western Australian electricity network (Western Power) was so enthusiastic regarding recent proposals to transfer its revenue regulation to the national regulatory framework, as the Western Australian regulator (the ERA) has much stronger powers than the national regulator (the AER).

This paper outlines how the Queensland Government has been the most proactive state government over the past decade in constraining the AER's powers and ensuring the retention of the deficiencies and loopholes in the regulatory framework that enable the Queensland networks to realise extraordinary profits from their overinvestment and inefficiencies.

It exposes the hypocrisy of claims by successive Queensland Governments regarding their commitment to ensuring efficient and fair electricity prices for Queensland consumers, providing examples of Queensland Government decisions over the past decade that demonstrate that hypocrisy, e.g.:

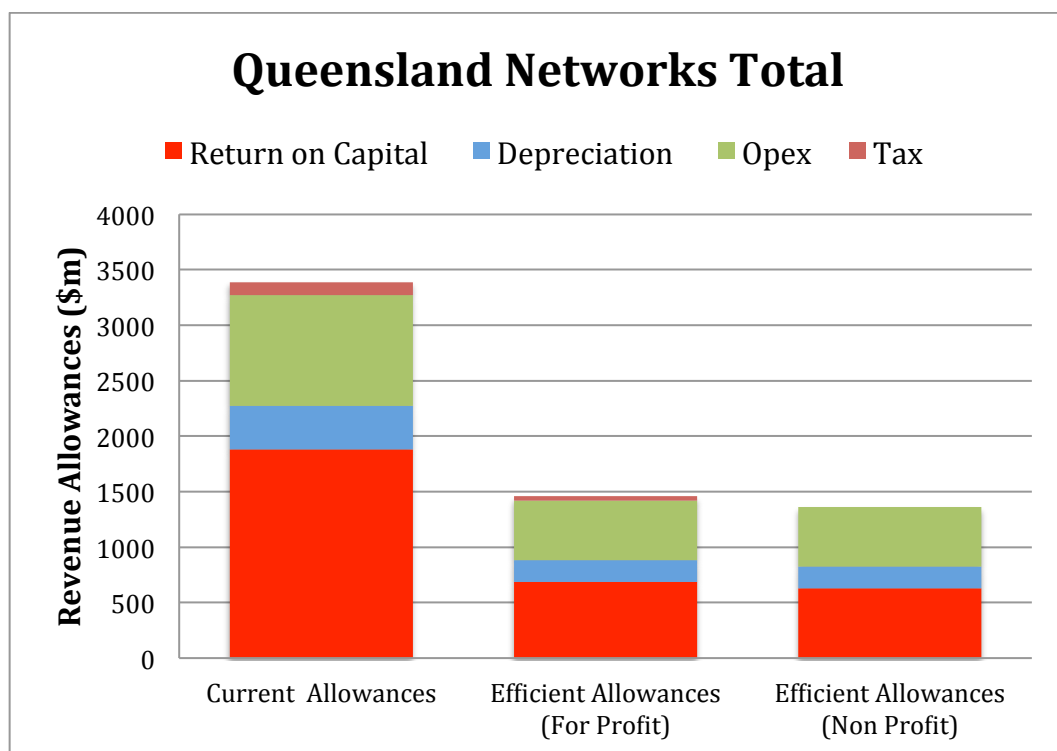
- Supporting the 2006 rule changes that removed the requirement for the regulator to optimise the networks' regulatory asset bases (RABs). As predicted by numerous stakeholders at the time, those rule changes resulted in extraordinary levels of overinvestment and consequential price and profitability increases by the Queensland networks
- Increasing the Queensland reliability standards in 2005 with no consideration of the price increases to Queensland consumers and no consideration of the value that Queensland consumers place on reliability
- Allowing the Queensland networks to systemically use overblown load forecasts to game the regulator (the AER) to provide capex allowances well in excess of the required levels

- Supporting Ergon Energy’s legal challenge to the AER’s benchmarking process – a legal challenge that resulted in NSW and ACT consumers paying \$3 billion above the AER’s revenue determinations and that will further raise Queensland’s networks’ prices.
- Strongly resisting the abolition of the Limited Merits Review (LMR) process – the one-sided appeal process that enables the networks to contest the AER’s revenue determinations. Since 2008, Australian electricity networks’ appeals through the LMR process have resulted in over \$12 billion in additional revenue being passed on to Australian consumers

1.9 Assessment Of Efficient Prices For The Queensland Networks

This paper provides detailed estimates of efficient revenues and prices for each Queensland network, based on the conclusions of various independent analysts – i.e. revenues that reflect reasonable returns on efficient investments and the recovery of efficient costs.

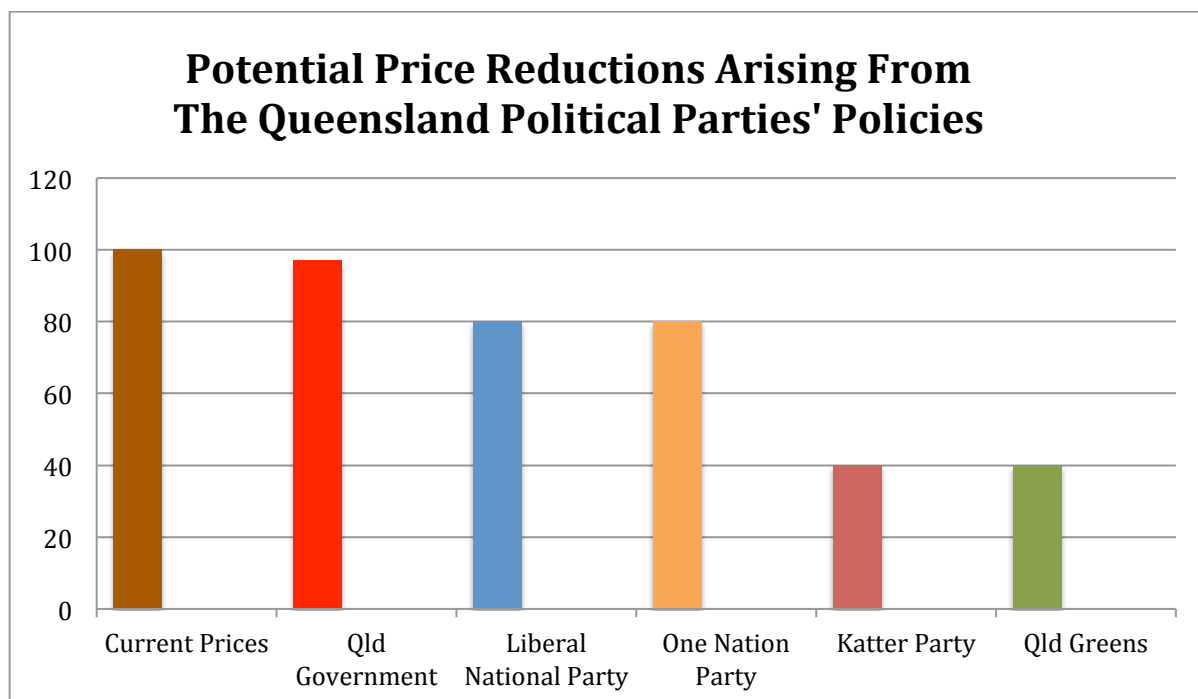
It demonstrates that the Queensland networks’ current revenues and prices are over twice the efficient levels.



1.10 Potential Price Reductions From The Queensland Political Parties’ Policies

In response to pressure from the Queensland community, Queensland’s political parties are currently proposing various policies aimed at reducing the Queensland networks’ prices and profits. This paper provides an assessment of those policies and the extent to which they would drive the Queensland networks’ prices towards efficient levels.

The chart overleaf illustrates that the Queensland political parties’ proposed policies would potentially deliver network price reductions of up to 60%.



1.11 Business As Usual is Unsustainable

It is clear from the various policies proposed by Queensland's political parties that there is broad political awareness that business as usual is unsustainable.

The Queensland networks' excessive prices are inflicting major damage on the Queensland community and the Queensland economy.

This paper demonstrates that the Queensland networks' excessive prices are driving an industry death spiral that will ultimately be much more destructive to the value and future viability of Queensland's government-owned energy companies than the short-term impacts of implementing more sustainable prices.

It demonstrates the irresponsibility of continuing to allow Queensland's state budget to be so heavily dependent upon the extraction of unsustainable profits from Queensland's monopoly electricity networks.

The Queensland community is becoming increasingly aware of the real reason for Queensland's excessive electricity prices and is becoming increasingly vocal in letting Queensland's political leaders know that they will no longer be played as fools.

The new delicately balanced Queensland parliament provides an opportunity for the new Queensland Government to seriously address the key driver of Queensland's excessive electricity prices and reduce the Queensland state budget's dependence on unsustainable profits from Queensland's monopoly electricity networks.

1.12 Recommendations

Recommendation 1. Set The Queensland Networks' Prices At Efficient Levels

As owner of the Queensland networks, the Queensland government has a high degree of control over their prices.

Rather than continuing to enable the Queensland networks to game the national regulator and charge prices over twice the efficient levels, the Queensland Government needs to exercise that control and ensure that the networks' prices are set at efficient levels.

The Australian Energy Regulator (AER) sets a limit on the maximum revenues the Queensland networks are allowed to collect from their customers. The networks have complete autonomy regarding the actual revenue they collect, as long as their total revenue does not exceed their maximum revenue caps.

Decisions to collect revenues below the networks' maximum revenue caps are not unusual and have been made by various network owners (including previous Queensland governments) in recent years.

For example, the NSW government recently directed Essential Energy (the NSW government-owned distribution network) to set its prices at 34% below the level that Essential Energy managed to game from the national regulatory framework.

Importantly, this paper outlines that the NSW government made that direction in response to the NSW community's outrage following the leaking of a document that confirmed that Essential Energy had cynically exploited its consumers, the regulator and the Australian legal system in its pursuit of excessive profits.

The Queensland community is becoming increasingly aware of the real reason for Queensland's excessive electricity prices and increasingly vocal in letting Queensland's political leaders know that they will no longer be played as fools.

The new delicately balanced Queensland parliament provides an opportunity for the new Queensland Government to seriously address the key driver of Queensland's excessive electricity prices and reduce the state budget's dependence on unsustainable profits from Queensland's monopoly electricity networks.

Importantly, setting the Queensland networks' revenues at levels below their maximum revenue caps can be implemented immediately and does not require any changes to the national regulatory framework.

Critics of calls to set the Queensland networks' prices at efficient levels tend to make short-sighted claims regarding the impact on the Queensland state budget. Such responses reflect a very narrow and short-term view of the issues and ignore the major damage that Queensland's excessive electricity prices are inflicting on the Queensland community and the state economy.

Setting Queensland's electricity prices at efficient levels will:

- Minimise further hardship for residential consumers
- Restore the international competitiveness and viability of Queensland industry
- Improve the long-term viability of the Queensland electricity supply chain
- Protect the Queensland Government owned energy companies from the value destruction that will inevitably arise from the continuation of the network death spiral

Recommendation 2. Revert To Queensland Government Controlled Regulation For The Queensland Networks

As currently being proposed by some Queensland political parties, there is a need to revert to Queensland Government controlled revenue regulation for the Queensland networks - as applied prior to 2006, and as currently applies to state-owned electricity networks in comparable federal countries including the United States, Canada and Germany.

Although Queensland Government controlled network revenue regulation will not be immune from political interference, the practical reality is that providing single point accountability to the Queensland Government for the networks' prices and profits is much more likely to deliver efficient network prices than continuing to place false hope that future state governments will progress the numerous long-overdue reforms to the deeply flawed national regulatory framework.

Queensland controlled regulation should be designed to avoid the deficiencies in the existing national regulatory framework outlined within this report.

Recommendation 3. Implement Fiscal Controls That Restrict The Queensland Government's Income Extractions to Sustainable Levels

The Queensland Government is extracting income from the Queensland networks at unsustainable levels.

There is a need for stronger fiscal controls that make it more difficult for Queensland Governments to extract unsustainable levels of income from the Queensland networks.

Furthermore, the Queensland Government should cease the practice of extracting competitive neutrality fees from the networks. This paper demonstrates that the Queensland Government's rationale for extracting competitive neutrality fees from the networks is based on a flawed application of the Competition Principles Agreement (CPA) and that it serves no purpose, imposing unnecessary costs on Queensland consumers whilst delivering no benefits.

Recommendation 4. Implement Strengthened Oversight Of The Queensland Networks

Successive Queensland Governments have had a "hands-off" approach to the governance of the Queensland government owned networks, enabling the networks to exploit loopholes and deficiencies in the national regulatory framework, pursuing outcomes that are not in Queensland consumers' long-term interests.

The Queensland Government needs to implement improved governance arrangements for the Queensland networks to ensure that they better reflect the Queensland communities' long-term interests. This should include:

- Preventing the networks from collecting windfall profits from over-forecasting their needs
- Much stronger oversight of the Queensland networks' advocacy and lobbying activities – ensuring that they cease opposing or delaying reforms aimed at improving their performance and productivity
- Increased scrutiny and transparency of the Queensland networks' performance
- Setting and overseeing capital and operational efficiency improvement programs, with the objective of improving the Queensland networks' productivity from bottom-quartile to top-quartile performance within the shortest possible timeframe
- Segregated financial reporting of the networks' regulated and non-regulated business activities
- Improved transparency of the directions being provided to the Queensland networks by the Queensland Energy Minister and Queensland Treasury

2 Background And Purpose

2.1 Background

In recent years, the Queensland community has become increasingly concerned with the levels of profits the Queensland government is extracting from the Queensland government-owned monopoly electricity networks (Energex, Ergon Energy and Powerlink Queensland) and the extent to which those profits are driving Queensland's excessive electricity prices.

In response to pressure from the Queensland community, Queensland's political parties are proposing various policies aimed at reducing the Queensland electricity networks' excessive prices and profits, including:

- The Queensland Government is proposing to provide a *\$50 electricity ownership dividend* payment for each Queensland household
- The *Queensland Liberal National Party (LNP)* is proposing to write down the Queensland networks' regulatory asset bases (RABs) and has publicly supported the findings and recommendations of the recent Grattan Institute study, which outlined the need for RAB write-downs of up to 38%.¹
- The *One Nation Party* has proposed to reduce Queensland's electricity prices by 20%, by ceasing dividend payments from the Queensland energy companies to the Queensland Government
- The *Katter's Australian Party* has proposed to revert the networks' pricing to "recovery only" and to abolish the application of the depreciated optimised replacement cost (DORC) asset valuation methodology (the methodology used to determine the networks' regulatory valuations (RABs) and 'return on capital' allowances
- The *Queensland Greens Party* has proposed to revert the networks back to non-profit public authorities, thereby removing the networks' profits from Queenslanders' electricity bills

In addition, the *Katter's Australian Party* and the *Queensland Greens* have proposed to deliver further significant price reductions by moving from the deeply flawed national regulation to Queensland Government controlled regulation, bringing back the responsibility for setting the Queensland networks' revenues to the Queensland Government.

2.2 Report Purpose

This paper provides an analysis of the profits the Queensland Government is extracting from the Queensland networks and how those profits are driving Queensland's excessive electricity prices.

It outlines the policy and regulatory implications of the findings and provides recommendations on the policy and regulatory changes required to reduce the Queensland networks' prices to efficient levels.

¹ Down to the wire: A sustainable electricity network for Australia, Technical Supplement, Grattan Institute, March 2018
The Grattan Institute calculated a range of RAB write downs for the Queensland electricity networks based on various assumptions – identifying required RAB write-downs off up to \$2.5bn (38%) for Powerlink Queensland, \$3.9bn (33%) for Energex and \$2.8bn (26.3%) for Ergon Energy

3 Queensland's Excessive Electricity Prices

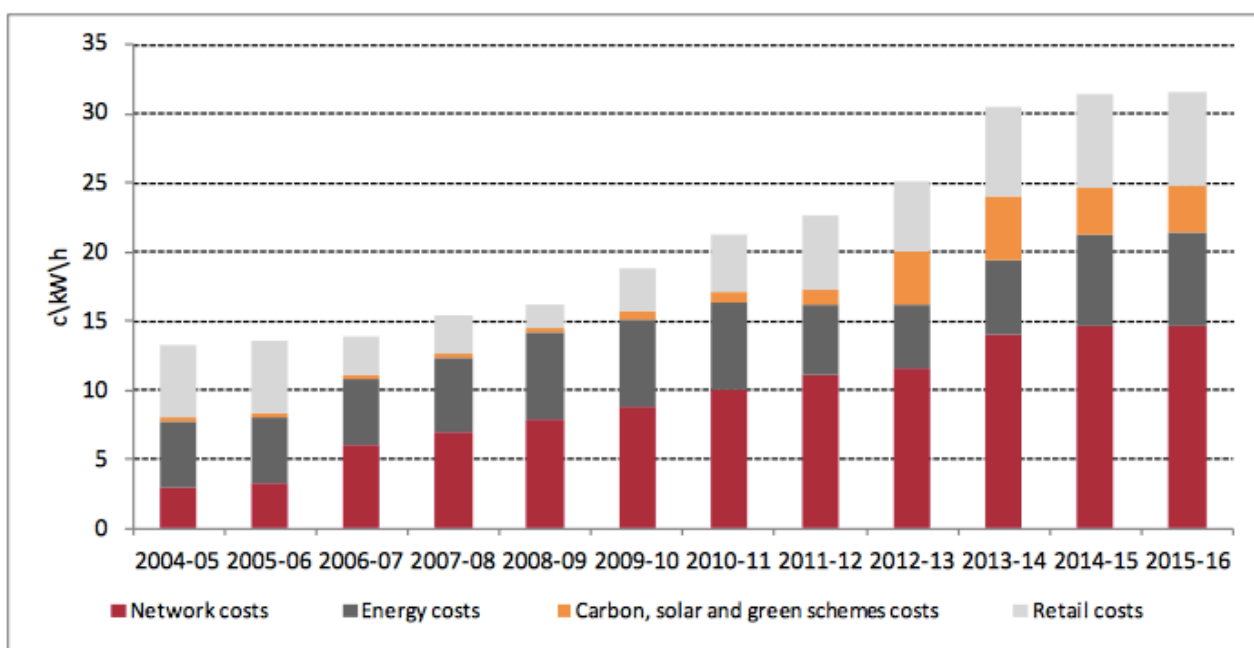
The National Electricity Market (NEM) is failing to deliver efficient Queensland electricity prices due to various market and regulatory failures.

Queensland's excessive electricity prices are presenting major hardship for residential consumers and destroying the international competitiveness of Queensland businesses.

3.1 Recent Trends In Queensland's Electricity Prices

The chart below illustrates recent trends in the breakdown of Queensland's electricity prices.²

Figure 1 Average Queensland Annual Tariff 11 Cost Breakdown (c/kWh)



The above chart illustrates that:

- Queensland's electricity prices doubled from 2007/08 to 2013/14
- The price rises over the past decade have been predominantly driven by increases in network charges, which increased six-fold from 2004/05 to 2014/15, accounting for over 95% of the total electricity price increases during the period
- As a result, network charges now account for over half of Queensland's electricity prices, whereas in 2004/05 they accounted for around 20%
- By contrast, generation and retail costs remained relatively stable over the period

² Queensland Productivity Commission, Electricity Pricing Issues Paper, October 2015, Page 8

3.2 Queensland's Excessive Network Prices

It is well understood that the key driver of Queensland's excessive electricity prices is the excessive prices of Queensland's monopoly electricity networks (Energex, Ergon Energy and Powerlink Queensland).

Review after review, inquiry after inquiry, has consistently concluded that the majority of the Queensland networks' price increases over the past decade were unnecessary and are the result of the Queensland networks exploiting deficiencies and loopholes in the National Electricity Market (NEM) regulatory framework, gaming the national regulator (the Australian Energy Regulator (AER)) to secure revenue allowances well above the efficient levels.³

Importantly, all of the reviews and inquiries have outlined that the Queensland networks' prices and profits have grown at the highest rates in Australia, with their owner (the Queensland Government) realising extraordinary profits from the networks' over investment and inefficiencies.

For example, the charts overleaf, from the current ACCC review into the drivers of Australia's electricity prices, highlight that increases in network prices was the dominant driver of Queensland's electricity price increases over the past decade, and that the increases in the Queensland networks' prices were the highest in Australia.⁴

The ACCC review also outlined that Queensland network charges are the highest in Australia.⁵

³ For example:

ACCC Retail Electricity Pricing Inquiry: Preliminary Report, 16 October 2017

Assets or Liabilities? The Need to Apply Fair Regulatory Values to Australia's Electricity Networks, Hugh Grant, 5th May 2016

Senate Inquiry Into The Performance and Management of Electricity Network Companies, June 2015

Down to the wire: A sustainable electricity network for Australia, Grattan Institute, 25 March 2018

Victorian Electricity Distribution Businesses Submission to the Senate Select Committee Inquiry into the performance and management of electricity network companies; 18th December 2014

Queensland Government Independent Review Panel (IRP) on Network Costs, Final Report, 2013

Electricity Network Regulatory Frameworks: Productivity Commission Inquiry Report, 9 April 2013

Senate Select Committee on Electricity Prices: Reducing Energy Bills and Improving Efficiency

Write-downs to address the stranded assets of electricity networks in the National Electricity Market: evidence and argument, CME, April 2015

A comparison of outcomes delivered by electricity transmission network service providers in the NEM, EUAA, 2012

Australia's rising prices and declining productivity: the contribution of its electricity distributors, EUAA, 2011

Shock to the system: Dealing with falling electricity demand, Grattan Institute, December 2013

Putting the customer back in front: How to make electricity cheaper. Grattan Institute, December 2012

The Garnaut Climate Change Review Update, Paper 8: Transforming the Electricity Sector, 2011

The Energy Market Death Spiral - Rethinking Customer Hardship, Paul Simshauser and Tim Nelson, 2012

AMP Submission to the Productivity Commission - The Capital Efficiency of Australian Electricity Distributors, Results of a Benchmarking Study, November 2012

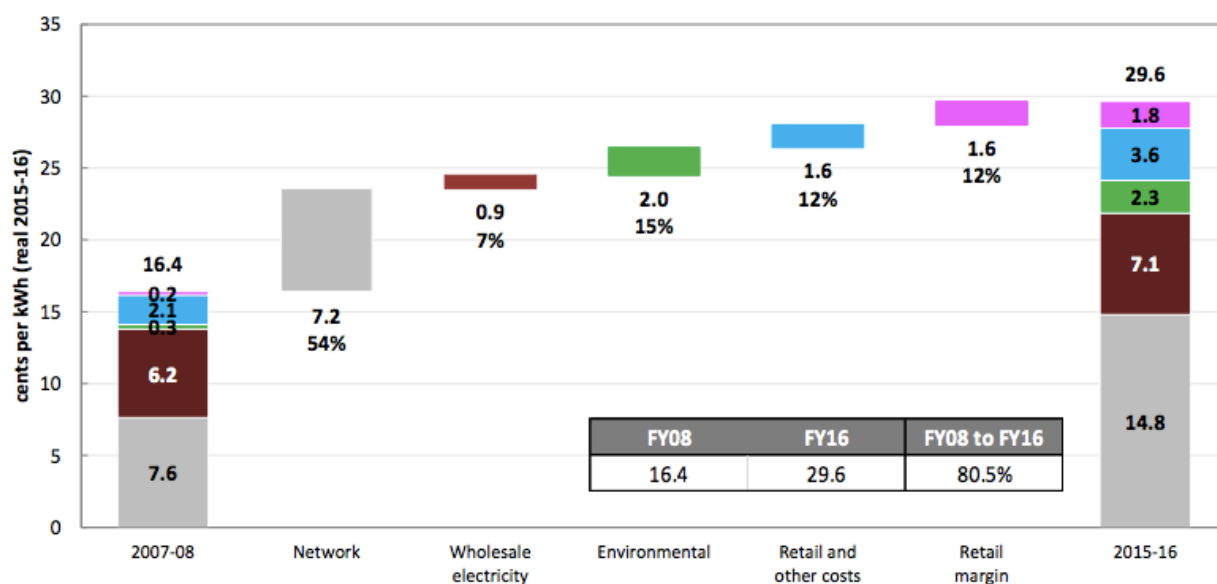
Utilities Policy: Independent Regulation of Government-Owned Monopolies: An Oxymoron?, December 2014

⁴ ACCC Retail Electricity Pricing Inquiry: Preliminary Report, 16 October 2017, Page 62

AER Benchmarking Reports and AER State Of The Energy Market 2017 Report

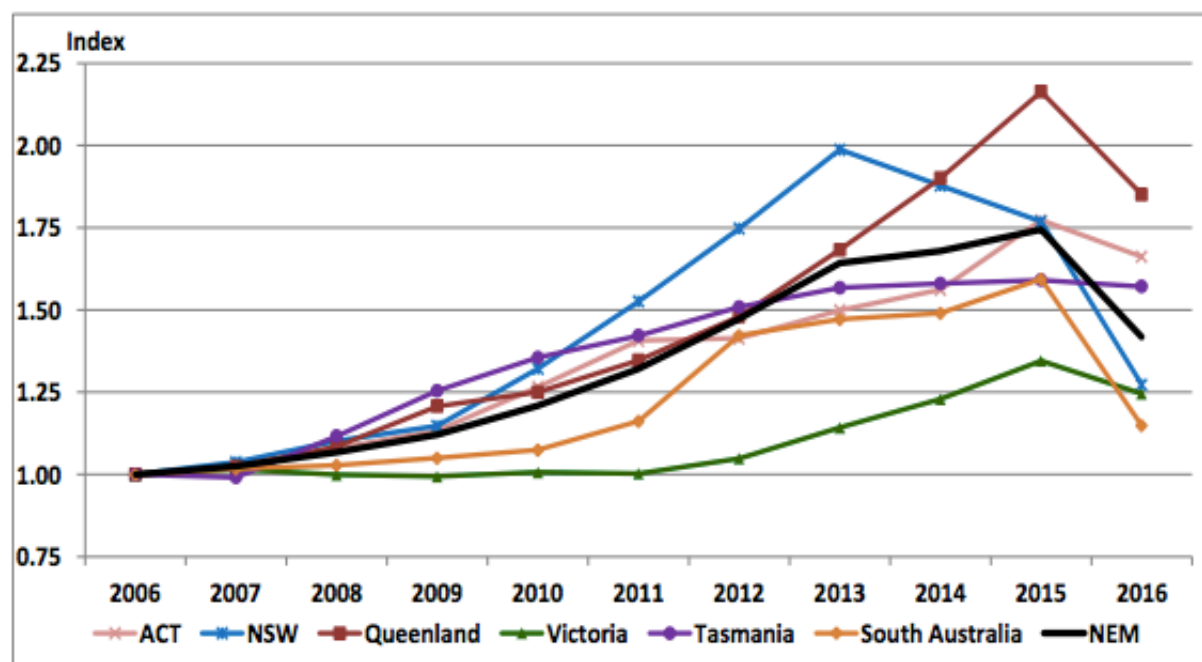
⁵ ACCC Retail Electricity Pricing Inquiry: Preliminary Report, 16 October 2017

Figure 2.21: Change in average Queensland residential effective price (c/kWh) from 2007–08 to 2015–16, real values in 2015–16 dollars excluding GST



Source: ACCC analysis based on retailers' data.

Figure 8 Index of network revenues, 2006 – 2016, by state and territory



Source: AER economic benchmarking Regulatory Information Notice responses

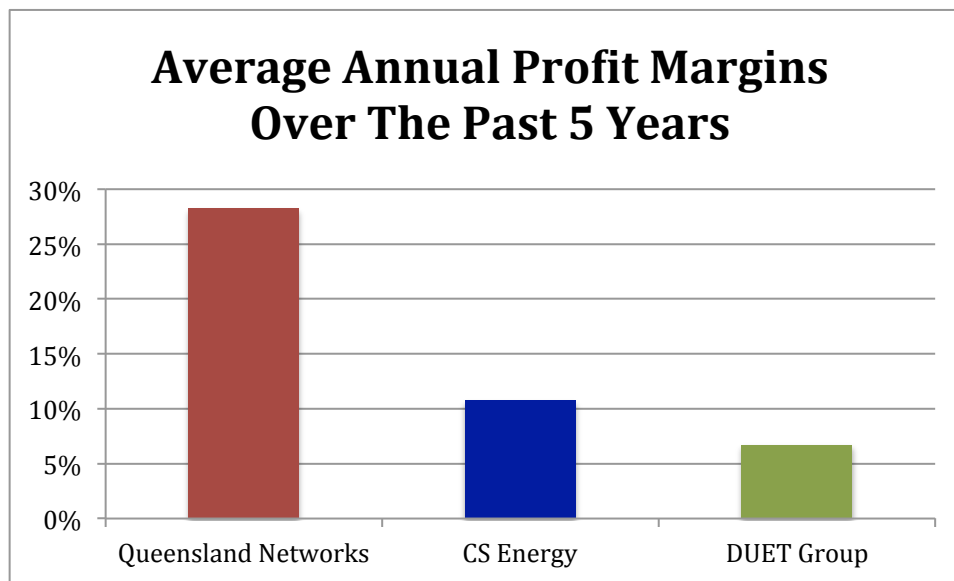
4 The Queensland Networks' Extraordinary Profits

4.1 The Queensland Networks' Annual Profit Margins

Over the past five years the Queensland networks have achieved annual pre-tax profit margins of up to 48%, with an overall average annual pre-tax profit margin of 28.3%.⁶

The networks' average annual profit margin equates to around 3-4 times the average annual profit margins being realised by comparable energy businesses, including the Queensland government owned generators.

For example, as illustrated in the chart below, over the past five years the DUET Group (owner of various Australian electricity and gas networks) achieved an average pre-tax profit margin of 6.7% - i.e. less than one quarter of the average profit margins realised by the Queensland electricity networks.⁷



The Queensland Government's returns from the government-owned networks contrast sharply with its returns from the government-owned generators.

For example, an analysis of the profit margins being achieved by the Queensland government-owned generator, CS Energy, over the past five years, identifies that:⁸

- CS Energy made losses in three out of the past five years
- CS Energy's average pre-tax profit margin amounted to 10.8%

Unlike Queensland's monopoly networks, Queensland's government owned generators operate in a competitive market that (until recently) has punished CS Energy for over-investment and inefficiency.

Consequently, Queensland's government-owned generators incurred significant losses over the past decade (e.g. CS Energy's accumulated losses in 2017 amounted to \$566 million), requiring the Queensland Government to inject significant levels of equity to keep the business solvent.

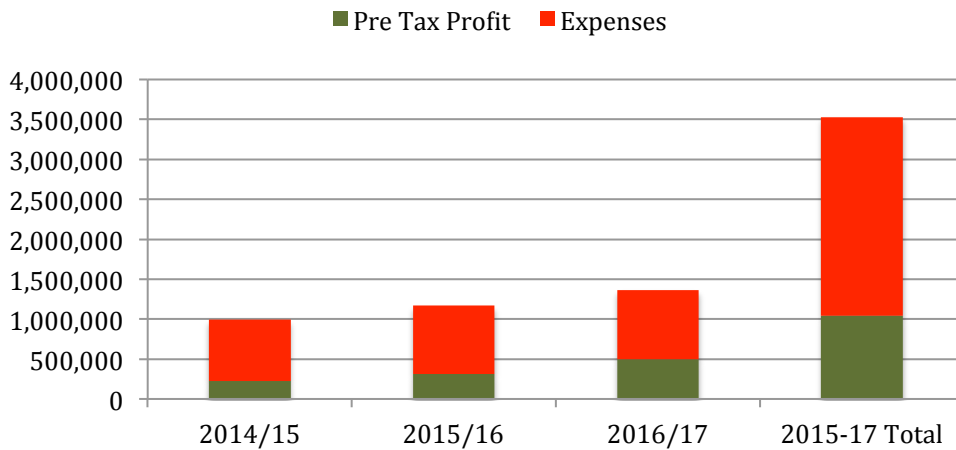
By contrast, as outlined in Appendix 1 of this report, the Queensland networks have delivered very high profits in every year since they were corporatised in the 1990s. Rather than requiring equity injections, successive Queensland governments have actually withdrawn equity from the networks and have frequently extracted income from the networks above the networks' levels of income generation.

⁶ Queensland Electricity Networks' Annual Financial Reports

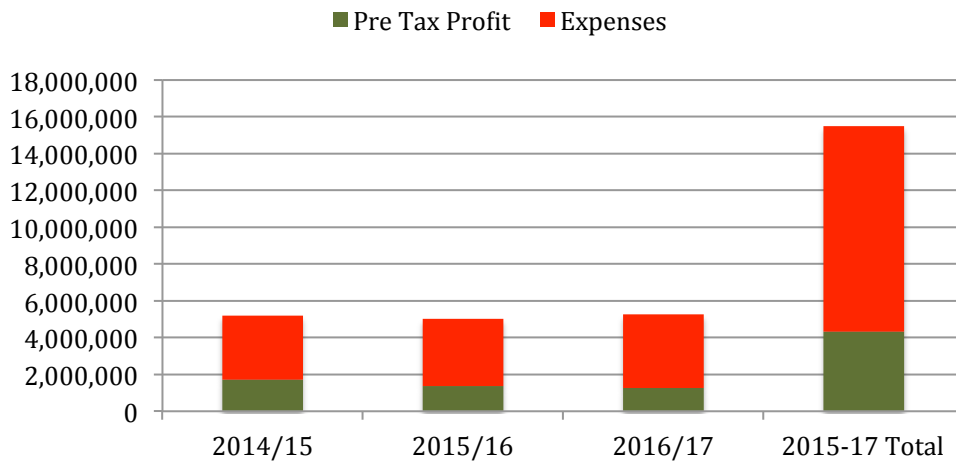
⁷ DUET Group Annual Reports

⁸ CS Energy Annual Reports

Powerlink Queensland

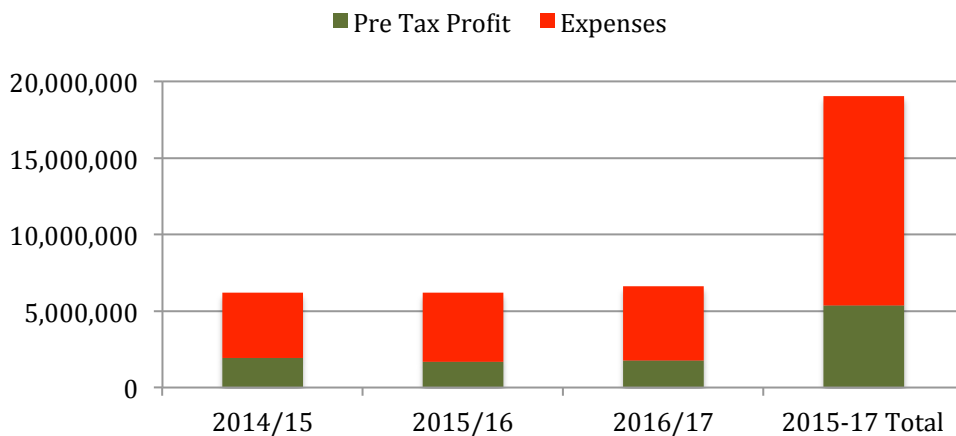


Energex and Ergon Energy *



* Energex and Ergon Energy were merged to form Energy Queensland in 2016 (2015 figures combined for consistency)

Queensland Networks Totals



4.2 Comparison With The Returns In Other Sectors

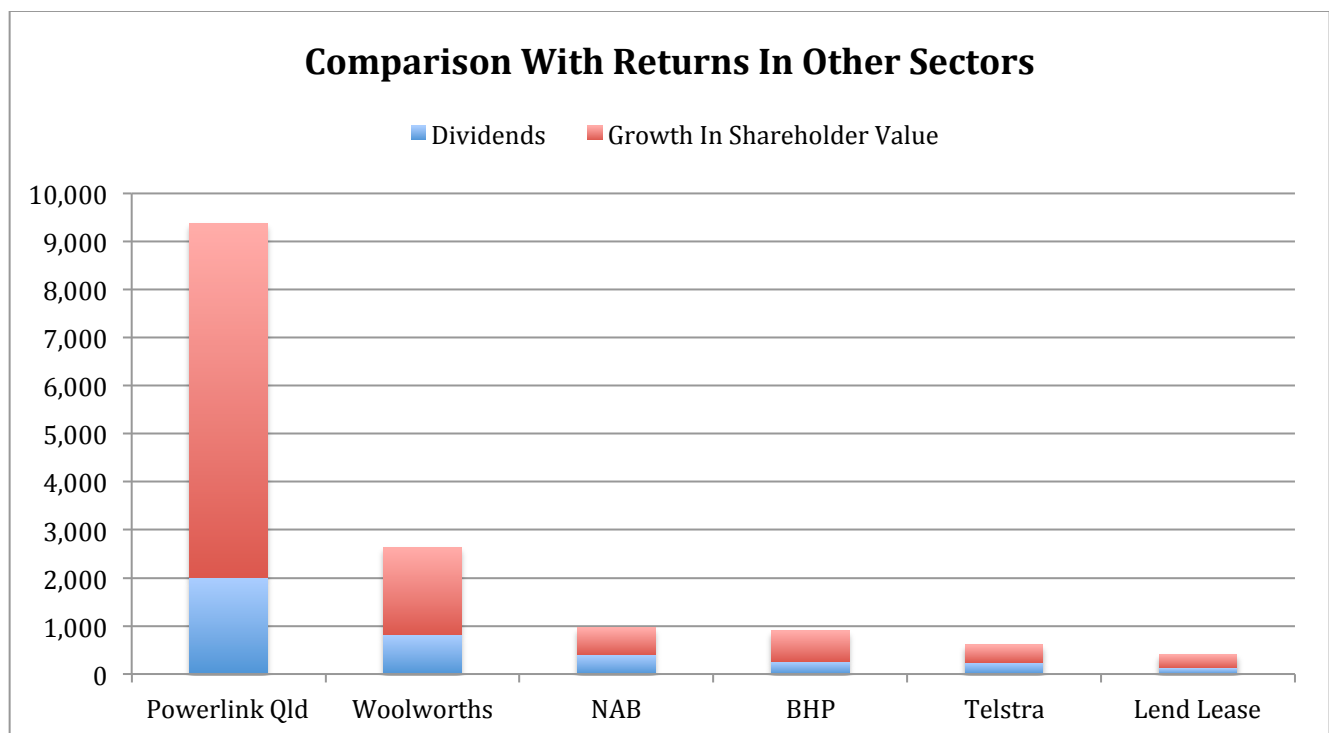
Appendix 1 of this report provides a detailed 15-year analysis of the actual financial returns being realised by the Queensland monopoly networks, compared to the returns realised in other sectors.

It outlines that the Queensland government is realising returns (return on equity) from the Queensland networks of many multiples of the returns being achieved by blue-chip companies in all other sectors of the Australian economy.

For example, the Queensland Government's returns from Powerlink Queensland amounted to:⁹

- 23 times the returns achieved by the Australian construction sector (Lend Lease)
- 15.5 times the returns achieved by the Australian telecommunications sector (Telstra)
- 10.5 times the returns achieved by the Australian minerals and resources sector (BHP)
- 10 times the returns achieved by the Australian banking sector (NAB)
- 3.6 times the returns achieved by Australia's most profitable supermarket (Woolworths)

No ASX 100 stock came close to Powerlink's returns



Note – the above chart actually understates the Queensland government's returns from Powerlink, as it only includes dividend income and does not include the other pecuniary benefits extracted by the Queensland Government - i.e. tax payments and competitive neutrality fees

⁹ Assets or Liabilities? The Need to Apply Fair Regulatory Values to Australia's Electricity Networks, Hugh Grant, 5th May 2016

Based on all of the available information, the profitability levels being realised by Queensland's electricity networks are the highest of any electricity networks in the world.

Importantly, those returns are being realised despite Queensland's electricity networks being amongst the most inefficient networks in Australia:

- Powerlink Queensland is the most inefficient transmission network in Australia ¹⁰
- Ergon Energy is the second least efficient distribution networks in Australia ¹¹

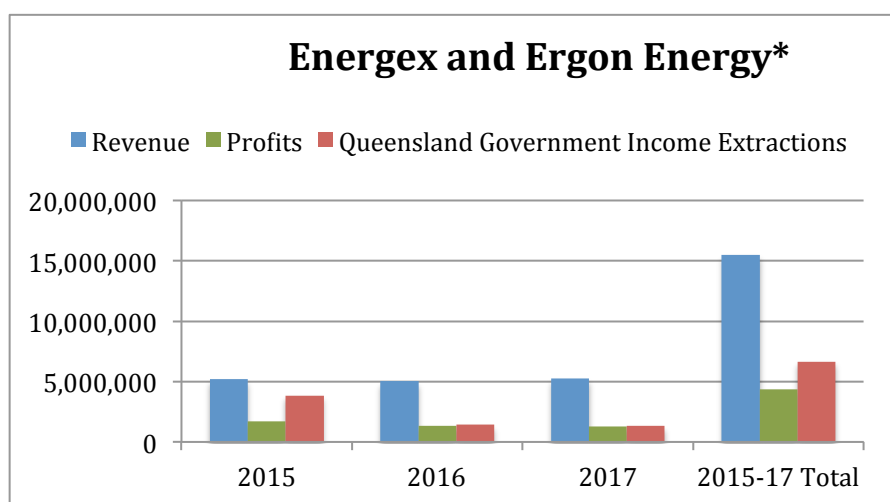
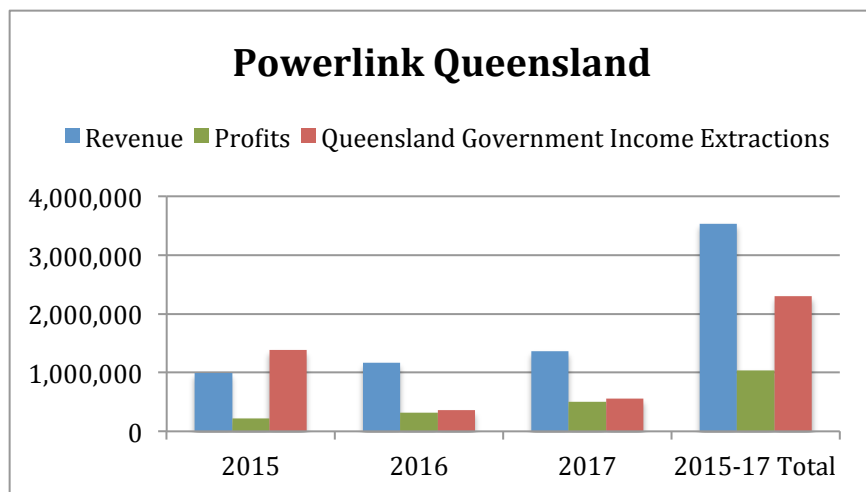
Clearly the Queensland networks' profits are grossly excessive and are **not** in Queensland consumers' long-term interest.

¹⁰ Powerlink' Multilateral Total Factor Productivity (MTFP) is 5th out of the 5 NEM transmission networks - see AER 2017 Transmission Benchmarking Report, 3 December 2017

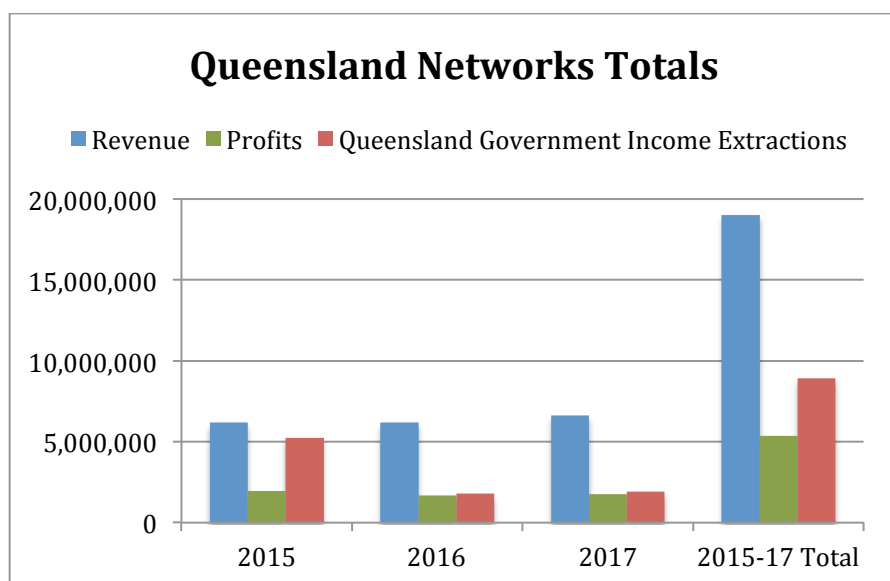
¹¹ Ergon Energy's Multilateral Total Factor Productivity (MTFP) is 12th out of the 13 NEM distribution networks – see AER 2017 Distribution Benchmarking Report, 3 December 2017

5 The Queensland Government's Income From The Networks

The charts below highlight the Queensland networks' annual revenues and profits; and the income extracted from the networks by the Queensland Government over the past three financial years.



* Energex and Ergon Energy were merged to form Energy Queensland in 2016 (2015 figures combined for consistency)



5.1 The Queensland Government's Unsustainable Income Extractions From The Electricity Networks

The Queensland government extracts three sources of income from the Queensland electricity networks:

- **Dividend payments** – the Queensland networks pay dividends to the Queensland Government
- **Tax equivalent payments** – the networks are corporatised and pay “tax equivalent” payments to the Queensland government at the commonwealth corporate tax rate
- **Competitive neutrality fees** – the networks source their debt from the Queensland government at interest rates below market rates. The Queensland Government charges the networks *competitive neutrality fees* to reflect the difference between the interest rates charged by the government and market interest rates¹²

The charts overleaf provide a breakdown of the income the Queensland Government extracted from the Queensland electricity networks from the above sources over the past three years.¹³

5.2 Income Extractions As A Proportion Of The Networks' Revenues

As illustrated in the above charts, over the past three years the Queensland Government extracted a total income of \$9 billion from the Queensland networks. **This equates to an average of 47% of the networks' total revenue of \$19 billion over the three-year period.**

The highest annual income extractions occurred in the 2014/15 financial year, with extractions equating to:

- 139% of Powerlink Queensland's revenue
- 87% of Ergon Energy's revenue
- 61% of Energex's revenue

5.3 Income Extractions As A Proportion Of The Networks' Profits

Despite the Queensland networks' extraordinary profits, in every year over the past three years the Queensland Government extracted more income from the networks than the networks created.

As outlined in the charts overleaf, the Queensland Government's income extractions over the past three years amounted to 167% of the networks' pre-tax profits.

Importantly, in 2014/15, the Queensland government's income extractions amounted to:

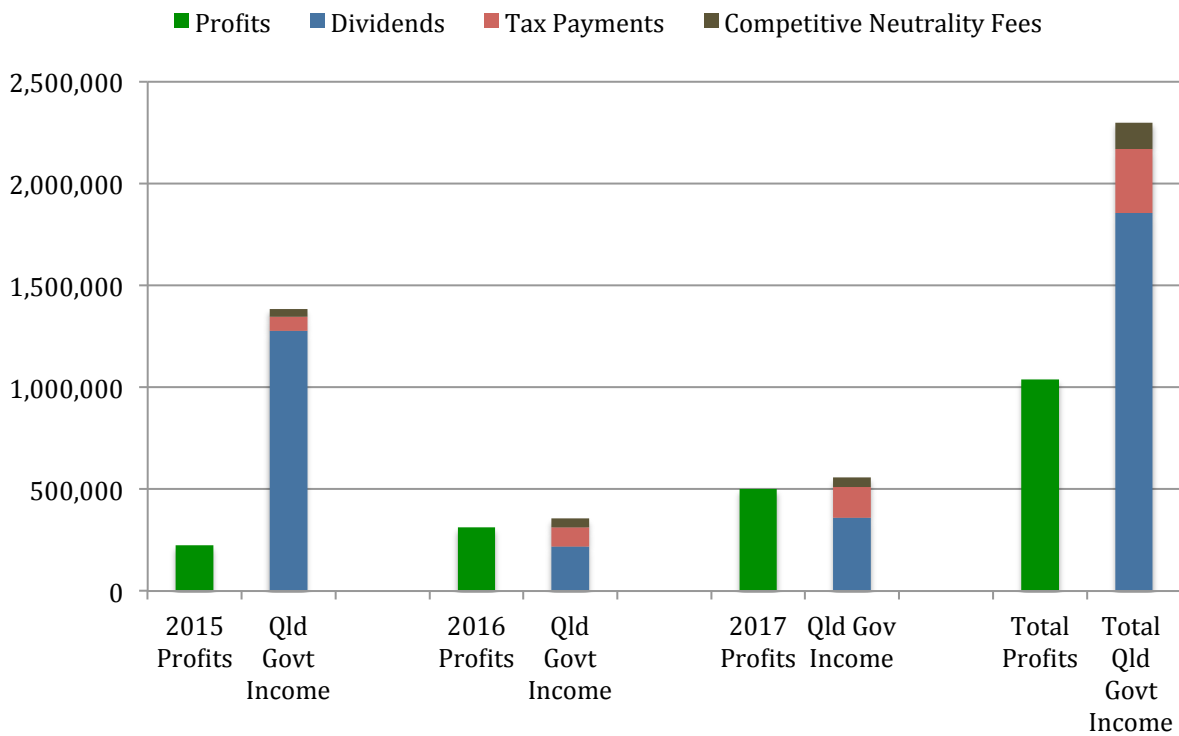
- 617% of Powerlink Queensland's pre-tax profits
- 230% of Ergon Energy's pre-tax profits
- 214% of Energex's pre-tax profits

¹² As outlined in Chapter 10 of this report the Queensland Government's rationale for charging competitive neutrality fees to the monopoly networks is based on a flawed application of the Competition Principles Agreement (CPA). It serves no purpose and simply imposes an unnecessary cost on Queensland consumers whilst delivering no benefits

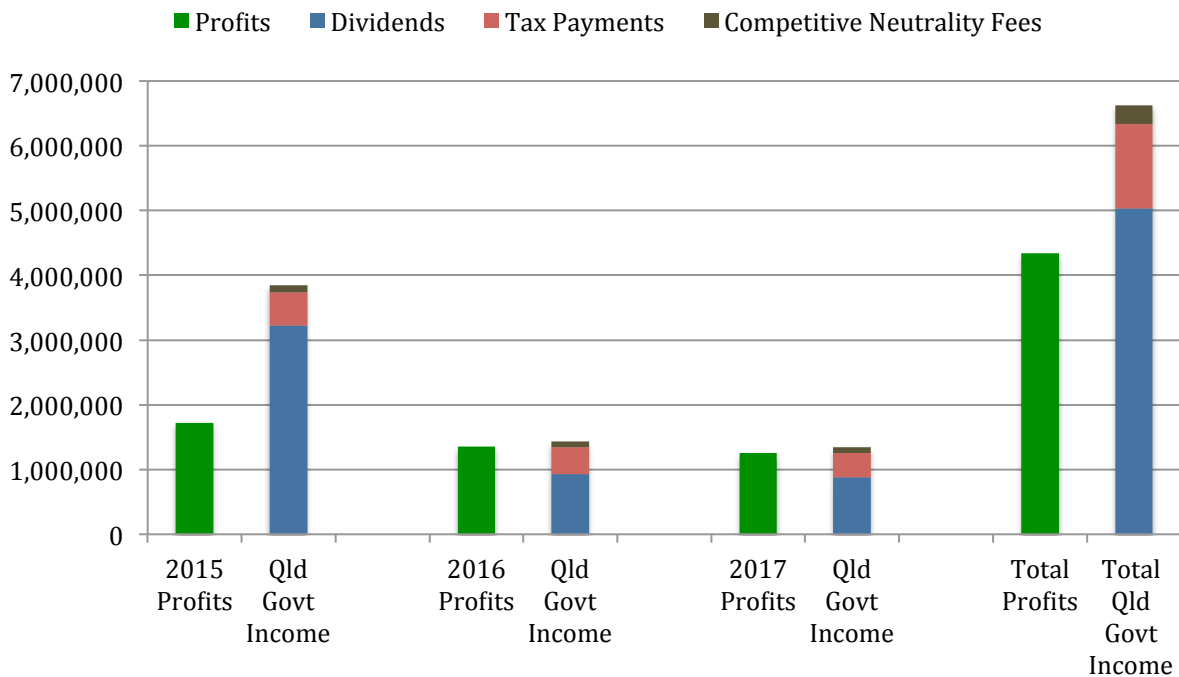
¹³ All data was sourced from the Queensland Networks' Annual Financial Reports and Queensland Government Budget Outlook Papers.

Where the Queensland Budget Outlook figures do not align with the networks' annual report figures, the networks' annual report figures have been used
Energex and Ergon Energy were merged to form Energy Queensland in 2016 (2015 figures have been combined for consistency)

Powerlink Queensland

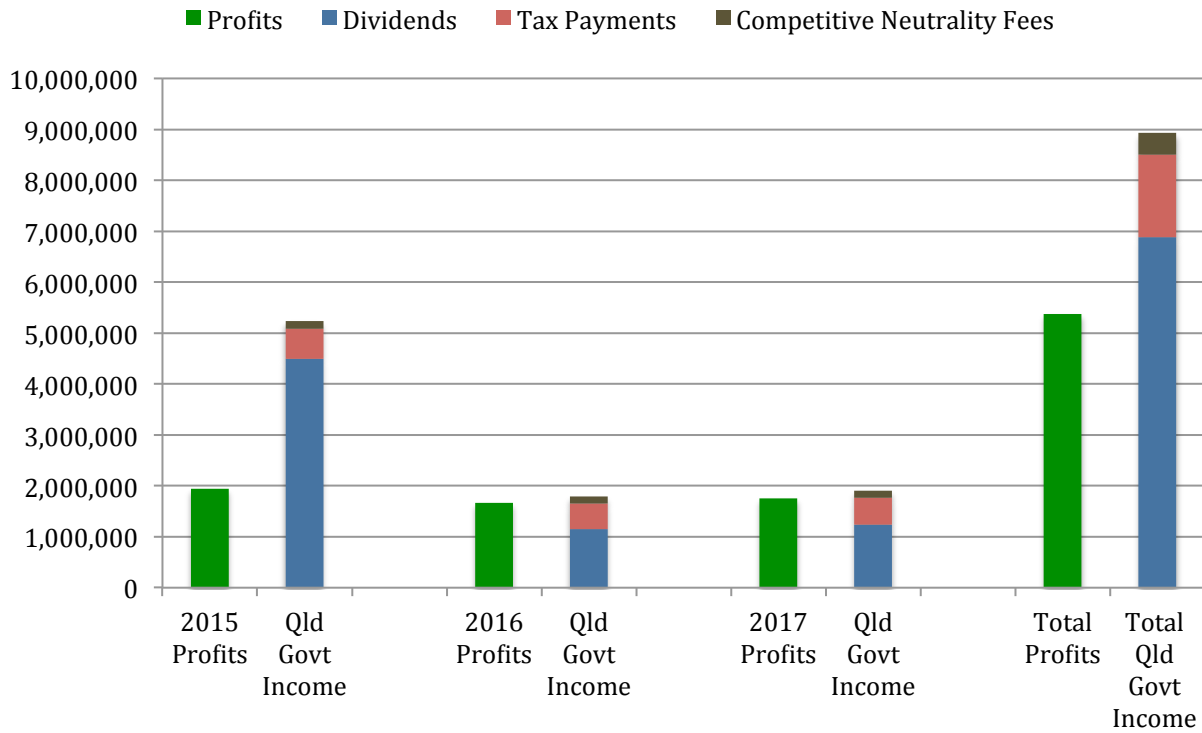


Energex and Ergon Energy*



* Energex and Ergon Energy were merged to form Energy Queensland in 2016 (2015 figures combined for consistency)

Queensland Networks Totals



6 The Impact Of The Queensland Government's Profit Extractions On Queenslanders' Electricity Bills

6.1 The Network Businesses' Regulated And Non Regulated Profits

The Queensland Government's profit extractions are ultimately recovered by the network businesses through their prices.

The majority of the network businesses' revenues are derived from the provision of regulated network services – i.e. revenue that is recovered from Queensland consumers as “network charges” within their electricity bills.

The remainder of the network businesses' revenues is derived from the provision of non-regulated services.¹⁴

As the Queensland networks do not provide segregated accounts for their regulated and non-regulated activities, it is not possible to precisely determine the proportions of the Queensland Government's profits that are extracted from the networks' regulated and non-regulated business activities.

However, it is well understood that the profit margins the networks are realising from their regulated activities are much higher than the profit margins they are achieving from their non-regulated activities.

For example, the recent audit of the Queensland energy companies' finances by the Queensland Audit Office, outlined that Ergon Energy's annual post tax profit margins from its energy retail activities ranged from 5.6% to 10% over the past 3 years, compared to post tax profits from the networks of 24-28%.¹⁵

As outlined throughout this report, the Queensland networks' regulated revenues are determined within a deeply flawed national regulatory framework, from which the networks are securing revenue allowances well above the efficient levels, enabling them to realise extraordinary profits of many multiples of the returns being realised by businesses in all other industry sectors.

It is clear that it is the extraordinary profits from the networks' regulated activities that are enabling the Queensland Government to extract such high levels of profits from the network businesses.

However, in the absence of segregated reporting of the network businesses' regulated and non-regulated profits, this analysis has adopted the highly conservative assumption that the Queensland Government's profit extractions are being derived in equal proportions from the networks' regulated and non-regulated activities.

Based on the information contained within the above Queensland Audit Office report, it is clear that this conservative assumption significantly understates the level of profits that are being collected from Queensland consumers through their electricity bills.

¹⁴ Powerlink, Energex and Ergon Energy provide non-regulated network and technical consulting services. Ergon Energy also provides electricity retailing services in regional Queensland

¹⁵ Energy: 2016-17 results of financial audits, Report 9 (2017-18), Queensland Audit Office, February 2018

6.2 The Queensland Government's Profits From The Networks' Charges

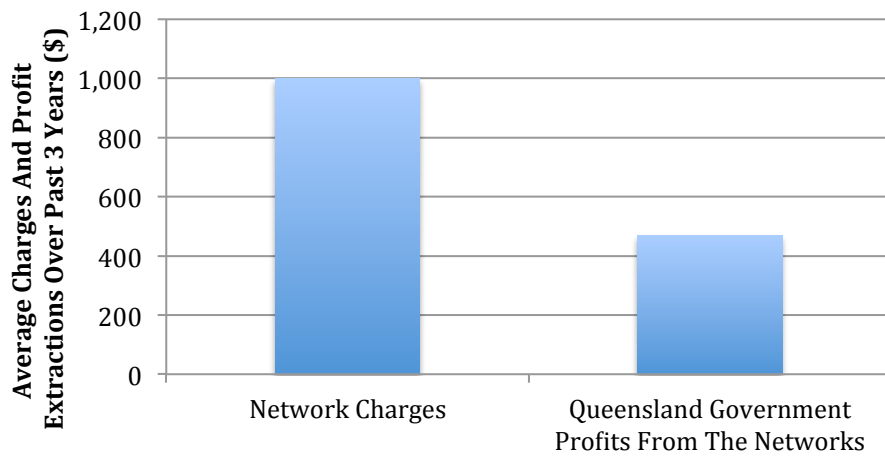
As outlined in the previous chapter, for every dollar that Queensland consumers paid for network charges over the past three years, the Queensland government collected 47 cents in profits – **i.e. the Queensland Government collected a 47% profit margin from the Queensland networks.**

The charts overleaf illustrate the profits that the Queensland Government collected from the networks as a proportion of typical network charges for Queensland household, small business and large business electricity bills.

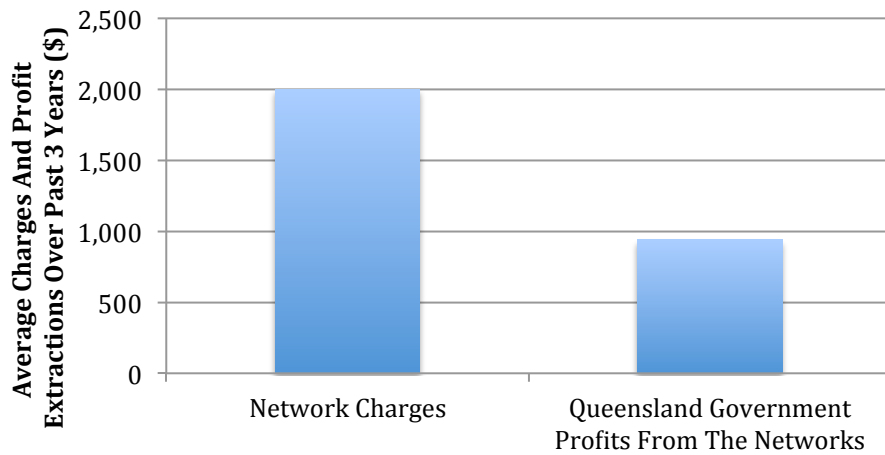
They illustrate that:

- For a Queensland household electricity bill with network charges of \$1,000, the Queensland Government's profits from the Queensland networks amounted to \$470
- For a Queensland small business bill with network charges of \$2,000, the Queensland Government's profits from the Queensland networks amounted to \$940
- For a large business user bill with network charges of \$200,000, the Queensland Government's profits from the Queensland networks amounted to \$94,000

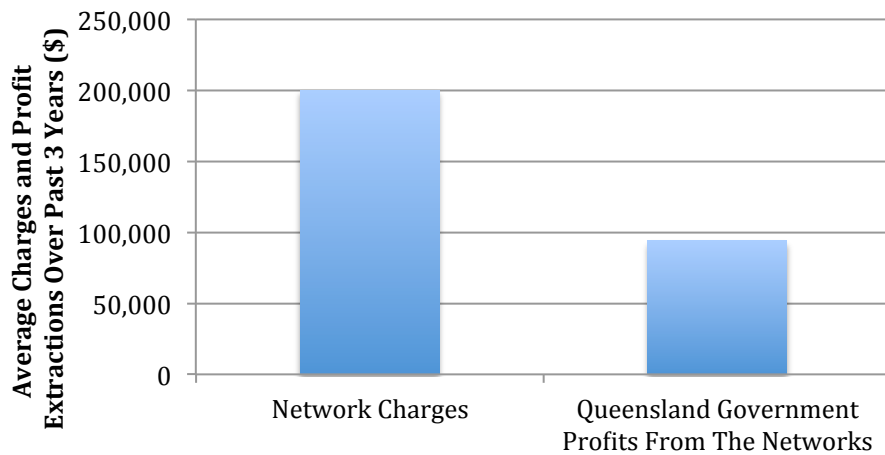
Queensland Household Bill



Queensland Small Business Bill



Queensland Large User Bill



7 The Addiction Of Successive Queensland Governments To The Networks' Extraordinary Profits

Successive Queensland government's have demonstrably failed to balance their conflicting roles of network owner and regulatory rule maker. The addiction of Queensland governments to the electricity networks' extraordinary profits has severely compromised their approach to energy policy and network regulation for many years.

Successive Queensland Governments have consistently chosen short-term profits over effective long-term energy policy, by:

- Ensuring (through COAG) the retention of deficiencies and loopholes in the national regulatory framework that enable the Queensland networks to achieve extraordinary profits; whilst
- Not fully considering the consequences of inflicting excessive electricity prices on Queensland consumers and the state economy

Having Queensland's electricity prices driven by such extraordinary profits contradicts the claims of successive Queensland Governments regarding their commitment to ensuring efficient and fair electricity prices for Queensland consumers.

Examples of decisions by Queensland Governments over the past decade that demonstrate this inconsistency include:

- Supporting the 2006 rule changes that removed the requirement for the regulator to optimise the networks' regulatory asset bases (RABs). As predicted by numerous stakeholders at the time, those rule changes resulted in extraordinary levels of overinvestment and consequential price and profitability increases by the Queensland networks¹⁶
- Increasing the Queensland's network reliability standards in 2005 with no consideration of the price increases to Queensland consumers and no consideration of the value that Queensland consumers place on reliability
- Allowing the Queensland networks to systemically use overblown load forecasts to game the regulator (the AER) to provide capex allowances well in excess of the required levels
- Supporting Ergon Energy's legal challenge to the AER's benchmarking process. That legal challenge was a major factor in the recent Australian Competition Tribunal decision that resulted in NSW and ACT consumers paying \$3 billion above the AER's revenue determinations – a decision that will have further flow on effects in raising the Queensland's networks' prices.¹⁷
- Supporting the Limited Merits Review (LMR) process – the one-sided appeal process that enables the networks to contest the AER's revenue determinations. Since 2008, Australian electricity networks' appeals through the LMR process have resulted in over \$12 billion in additional revenue being passed on to Australian consumers¹⁸

¹⁶ See Chapter 8 of this report for an overview of those rule changes

¹⁷ Ergon Energy Intervention to the Ausgrid, Endeavour Energy and Essential Energy Limited Merits Review (LMR) Appeal on the AER's 2014-19 revenue determination for the NSW distributors

¹⁸ The LMR was recently abolished, despite its abolishment being strongly opposed by the Queensland Government

8 The Key Deficiencies In The National Regulatory Framework

8.1 The Failure Of The National Regulatory Framework

Prior to transferring responsibility for the setting of the Queensland networks' revenues to the Australian Energy Regulator (AER), the networks' revenues were determined by Queensland Government regulatory authorities.¹⁹

The decision to transfer responsibility for the Queensland networks' revenue regulation to national regulation in 2006 was based on promises that it would deliver more efficient prices and improve the networks' productivity levels.

However, rather than delivering those promised improvements, national regulation of the Queensland networks' revenues by the AER has been a catastrophic failure, resulting in:

- A more than doubling of the Queensland networks' prices
- The Queensland networks achieving extraordinary profits of many multiples of the returns being achieved by ASX100 companies in all other industry sectors
- Extraordinary levels of over investment and gold plating – resulting in the Queensland networks' capital productivity levels being the lowest in Australia²⁰
- Extraordinary increases in the networks' operational costs - resulting in the Queensland networks' operational efficiency levels being the lowest in Australia²¹

In essence, the national regulatory framework was designed for private ownership and has been unable to prevent government owned networks (with their access to low-cost finance) from exploiting the incentives for overinvestment and gold plating, and profiting from their inefficiencies.

8.2 The Queensland Networks' Gaming Of The National Regulator

The Queensland networks' excessive prices and profits are the result of the networks' systemic gaming of the deeply flawed national regulatory framework.

The Queensland networks have systemically exploited various deficiencies and loopholes in the national regulatory framework, securing revenue allowances from the AER well above the efficient levels.

The key regulatory framework deficiencies exploited by the Queensland networks are highlighted overleaf.

¹⁹ Energex and Ergon Energy's revenues were determined by the Queensland Competition Authority (QCA)
Powerlink Queensland's revenue was previously determined by the Queensland Energy Reform Unit (QERU) and by the ACCC

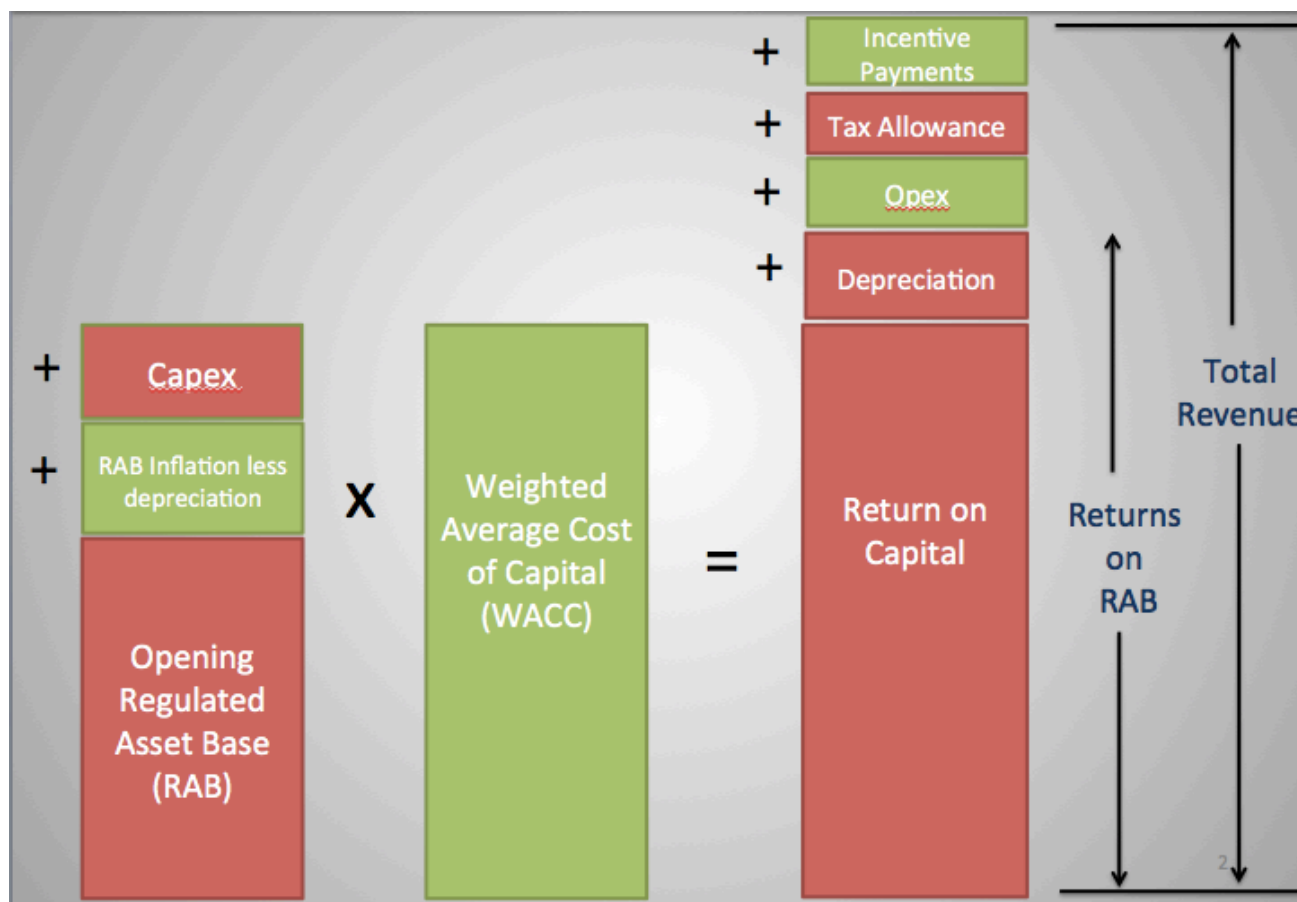
²⁰ Powerlink' Multilateral Total Factor Productivity (MTFP) Score is 5th out of the 5 NEM transmission networks - AER 2017
Transmission Benchmarking Report, 3 December 2017
Ergon Energy's Multilateral Total Factor Productivity (MTFP) Score is 12th out of the 13 NEM distribution networks – AER 2017
Distribution Benchmarking Report, 3 December 2017

²¹ AER Benchmarking Reports

8.2.1 The Gaming Of Excessive 'Return On Capital' Allowances

Australia's monopoly electricity networks receive guaranteed returns on their regulatory valuations – their regulatory asset bases (RABs).

As highlighted in the diagram below, those returns drive the majority of the networks' revenues and prices.



Since moving to the national regulatory framework, the Queensland networks have managed to secure 'return on capital' allowances from the Australian Energy Regulator (AER) well above the efficient levels.

The networks have secured those excessive allowances by exploiting various deficiencies in the AER's 'return on capital' determination process outlined below.

8.2.1.1 The Application Of An Inappropriate Asset Valuation Methodology

The networks' RABs are effectively valued at replacement cost, using the *Depreciated Optimised Replacement Cost (DORC)* valuation methodology - an asset valuation methodology that results in the highest possible valuations (and therefore prices) of all of the methodologies that could be applied.

By contrast, the UK networks' regulatory valuations were established on the basis of their historical costs resulting in their *RABs per connection* being less than a third of the Queensland networks' DORC valuations.

22

²² Write-downs to address the stranded assets of electricity networks in the National Electricity Market: evidence and issues, CME, April 2015

Determining the regulatory asset base for utility price regulation, David M Newbery, 1997

The decision to apply a replacement valuation methodology, rather than a cost-based valuation methodology, was not justified and is **not** in Australian consumers' long-term interests.²³

8.2.1.2 The Incentivisation Of Inefficient Expenditure

The proper implementation of the DORC valuation methodology requires the regulator to *optimise* the networks' RAB valuations to reflect the efficient value of assets needed to provide the required services.

This means that if the networks invest in more capacity than required, the regulator should exclude the value of the excess capacity from their RABs, thereby ensuring that consumers are not required to fund the excess capacity or inefficient investments.

However, when responsibility for the networks' revenue regulation was transferred to the national regulatory framework in 2006, major changes to the National Electricity Rules (NER) were implemented, including:²⁴

- The removal of the requirement for the regulator to optimise the networks' RABs, and
- New rules that ensured that all future capex incurred by the networks was automatically rolled into their RABs without any prudence or efficiency reviews

The removal of the optimisation and capex prudence review provisions from the National Electricity Rules (NER) contrasts sharply with the provisions contained within the regulatory rules in other jurisdictions in Australia and overseas.

For example, the regulatory rules that apply to Australia's gas networks and to the Western Australian electricity networks have always required the regulator to apply a broad range of optimisation and capex prudence review tests to the determination of the networks' regulatory valuations.²⁵

As predicted by numerous stakeholders, the 2006 rule changes incentivised extraordinary levels of over-investment by the networks - particularly by the Queensland government-owned networks due to their lower borrowing costs and the additional pecuniary benefits that they realise from over-investment.

Importantly, the Queensland networks' levels of overinvestment were the highest in Australia.²⁶

²³ Utility Asset Valuation – A User's Perspective, R. Booth, 16 June 2000
Replacement Cost Asset Valuation and Regulation of Energy Infrastructure Tariffs, D.J. Johnstone, 2003
The DORC valuation model of regulated infrastructure assets, Johnstone, D.J. and Loneragan, W, 2006
Submission to the Senate inquiry into the Performance and Management of Electricity Network Companies, D Johnstone, December 2014

²⁴ See for example the AEMC Rule Change Determination, National Electricity Amendment (Economic Regulation of Transmission Services), November 2006
The RABs for the distribution network are specified in Schedule 6.2 of the NER 27 The RABs for the transmission networks are specified in Schedule 6.2A of the National Electricity Rules (NER)

²⁵ Western Australia Electricity Networks Access Code 2004, Clauses 6.44 to 6.63
National Gas Rules Version 36, Clause 77, Pages 54-58

²⁶ Assets or Liabilities? The Need to Apply Fair Regulatory Values to Australia's Electricity Networks, Hugh Grant, 5th May 2016
Senate Inquiry Into The Performance and Management of Electricity Network Companies, June 2015
Victorian Electricity Distribution Businesses Submission to the Senate Select Committee Inquiry into the performance and management of electricity network companies, 18th December 2014
Down to the wire: A sustainable electricity network for Australia, Grattan Institute, 25 March 2018
Queensland Government Independent Review Panel (IRP) on Network Costs, Final Report, 2013
Electricity Network Regulatory Frameworks: Productivity Commission Inquiry Report, 9 April 2013
Senate Select Committee on Electricity Prices: Reducing Energy Bills and Improving Efficiency
Write-downs to address the stranded assets of electricity networks in the National Electricity Market: evidence and argument CME, April 2015
A comparison of outcomes delivered by electricity transmission network service providers in the NEM, EUAA, 2012

As outlined in Appendix 2 of this report, a key factor that enabled the Queensland networks' over-investment was their systemic over-forecasting of demand, with the networks using overblown load forecasts to game the AER to provide capex allowances well in excess of the required levels.

Appendix 2 outlines that the Queensland networks' demand forecasts have been consistently overblown to a much higher degree than all of the other Australian electricity networks.

As a result, the Queensland networks expended substantially more capital than the privately owned networks, both in absolute terms and after normalisation for changes in network outputs such as peak demand and energy delivered.

For example, when normalised for changes in demand:²⁷

- Energex and Ergon invested in growth related capex at 7 times the level of the Victorian distributors
- Powerlink Queensland invested in growth related capex at 15-20 times the rate of the Victorian transmission network

The Queensland networks' over-investment has resulted in a large degree of excess system capacity and significant declines in their asset utilisation levels, with the networks having the lowest capital efficiency levels in the National Electricity Market (NEM)²⁸

It also resulted in the Queensland networks' RABs growing at much higher rates than the networks in the other states. For example, the Queensland distributors' 'RABs per connection' are 250% higher than the Victorian distributors, having increased from being 60% higher in 2001.²⁹

An explanation of why the privately owned networks restrict their investments and control their costs much more effectively than government-owned networks was outlined by the Victorian electricity networks in the submissions and evidence they provided to the *Senate inquiry Into The Performance and Management of Electricity Network Companies*.³⁰

As stated by Alistair Parker of AusNet Services when presenting evidence to the Senate Inquiry:

"It is just fundamentally because of the ownership structure. We spend less to get the same outcomes"

"We do better over the long run by spending less, by finding cheaper alternatives to deliver good outcomes"

"This is not our view: it is the Australian Competition and Consumer Commission's (ACCC's) view, it is the AER's view, it is the Productivity Commission's view, it is the Energy Users Association of Australia's view"

"Person after person looks at this objectively and looks at the data that is before them and finds we are cheaper and more reliable. I put that down to our ownership structure"

Australia's rising prices and declining productivity: the contribution of its electricity distributors, EUAA, 2011

Shock to the system: Dealing with falling electricity demand, Grattan Institute, December 2013

Putting the customer back in front: How to make electricity cheaper. Grattan Institute, December 2012

The Garnaut Climate Change Review Update, Paper 8: Transforming the Electricity Sector, 2011

The Energy Market Death Spiral - Rethinking Customer Hardship, Paul Simshauser and Tim Nelson, 2012

AMP Submission to the Productivity Commission - The Capital Efficiency of Australian Electricity Distributors, Results of a Benchmarking Study, November 2012

Utilities Policy: Independent Regulation of Government-Owned Monopolies: An Oxymoron?, December 2014

²⁷ EUAA: A comparison of outcomes delivered by electricity transmission network service providers in the NEM, Oct 2012

EUAA: Australia's rising prices and declining productivity: the contribution of its electricity distributors

²⁸ AER Transmission and Distribution Benchmarking Reports, 3 December 2017

²⁹ EUAA: A comparison of outcomes delivered by electricity transmission network service providers in the NEM, Oct 2012

EUAA: Australia's rising prices and declining productivity: the contribution of its electricity distributors

³⁰ Submission and Evidence to the Senate Select Committee Inquiry into the performance and management of electricity network companies: Victorian Electricity Distribution Businesses, 18th December 2014

As a result, the Queensland networks' returns on their regulatory asset bases (RABs) drive their prices to a much higher degree than all of the other Australian electricity networks.

For example, over the previous regulatory period, the Queensland networks' returns on their RABs accounted for:³¹

- 77 % of Powerlink Queensland's revenue allowances
- 75% of Ergon Energy's revenue allowances
- 74% of Energex's revenue allowances

8.2.2 The AER's Flawed 'Return On Capital' Determination Methodology

To retain the networks' RAB valuations at replacement value, the networks' RABs are artificially inflated each year (by CPI).

However, the AER's methodology for determining the networks' 'return on capital' allowances does not appropriately deal with the impacts of artificially inflating the networks' capital bases:

In essence:

- The AER's methodology for determining the required percentage returns is based on the returns that investors require on their **actual** capital investments
- However, the AER calculates its 'return on capital' allowances by multiplying those percentage returns to **artificially inflated** capital bases

Furthermore, the AER's percentage returns are based on the returns required by businesses that face asset write-down risks, whereas Australia's monopoly networks are specifically protected from such risks.

Those inconsistencies are resulting in the AER providing 'return on equity' allowances to the Queensland networks of 3-4 times the efficient levels.³²

8.2.3 Estimations Of Efficient Regulatory Asset Bases (RABs) For The Queensland Networks

In recent years there have been numerous calls from various stakeholders for the Queensland networks' RABs to be revalued to efficient levels.

It is important to understand that most estimates of the required write downs for the Queensland networks' RABs, including the recently released Grattan Institute paper, have only actually estimated the write-downs required to address the networks' *inefficient investments*.³³

³¹ 'Return on capital' plus 'return of capital' (depreciation) allowances

³² Consumer Challenge Panel (CCP2) Submissions to the AER on The AER's Draft 2015-20 Revenue Determinations for Energex and Ergon Energy - Bruce Mountain and Hugh Grant submissions
Consumer Challenge Panel CCP4 (Hugh Grant) Submission to the AER on The AER's Revenue Determination for Powerlink Queensland

³³ See for example:

Victorian Electricity Distribution Businesses Submission to the Senate Select Committee Inquiry into the performance and management of electricity network companies, 18th December 2014

Down to the wire: A sustainable electricity network for Australia, Grattan Institute, 25 March 2018

Putting the customer back in front: How to make electricity cheaper. Grattan Institute, December 2012

The Garnaut Climate Change Review Update, Paper 8: Transforming the Electricity Sector, 2011

Senate Inquiry Into The Performance and Management of Electricity Network Companies, June 2015

However, as outlined in section 8.2.1.1 above, a comprehensive assessment of efficient RAB valuations also needs to assess the appropriateness of the networks' initial (DORC) valuations.

In March 2016, the author of this report performed the most comprehensive analysis and assessment of efficient RABs for Australia's electricity monopoly networks, quantifying the required adjustments to the networks' initial (DORC based) valuations and the required adjustments to address the networks' subsequent inefficient investments.³⁴

That 150-page report demonstrated that, based on highly conservative assumptions, the Queensland networks' RAB valuations are at least twice the efficient levels.

Over the past 6 months, the *Queensland Liberal National Party (LNP)* has been calling for the Queensland government to write down the Queensland networks' regulatory asset bases (RABs). For example, the LNP has publicly supported the findings and recommendations of the recent Grattan Institute study, which calculated (on the basis of inefficient investment alone) the need for RAB write-downs of up to 38% for the Queensland networks.³⁵

It is important to note that, as acknowledged by the Grattan Institute throughout its report, the Grattan Institute's calculations of the required RAB write-downs were based on highly conservative assumptions that resulted in their recommended RAB write-downs for the Queensland networks being much lower than the estimations of other independent analysts.³⁶

However, it is important to acknowledge that the *Queensland Liberal National Party (LNP)* proposal to write down the networks' RABs is the first such proposal from a dominant Queensland political party.

It reflects a long overdue acknowledgement of the unsustainability of continuing to allow the Queensland networks' excessive RABs to drive their excessive prices and profits.

Excessive 'return on capital' allowances are the primary driver of the Queensland networks' excessive prices and profits and will continue to do so until the above deficiencies are addressed.

Australia's rising prices and declining productivity: the contribution of its electricity distributors, EUAA, 2011
A comparison of outcomes delivered by electricity transmission network service providers in the NEM, EUAA, 2012

Senate Select Committee on Electricity Prices: Reducing Energy Bills and Improving Efficiency
Shock to the system: Dealing with falling electricity demand, Grattan Institute, December 2013

Write-downs to address the stranded assets of electricity networks in the National Electricity Market: evidence and issues, CME, April 2015

³⁴ Assets or Liabilities?: The Need to Apply Fair Regulatory Values to Australia's Electricity Networks, Hugh Grant, 5th May 2016

³⁵ Down to the wire: A sustainable electricity network for Australia, Grattan Institute, March 2018

The Grattan Institute paper outlined a range of RAB write-downs for the Queensland electricity networks based on various assumptions. The paper calculated required RAB write-downs of up to \$2.5bn (38%) for Powerlink Queensland, \$3.9bn (33%) for Energex and \$2.8bn (26.3%) for Ergon Energy

³⁶ The Grattan institute paper did not challenge the networks' initial DORC valuations. As outlined within this paper, other industry analysts have concluded that the Queensland networks' initial DORC valuations were around three times their actual 'historic cost' valuations

The Grattan Institute's methodology for calculating the network's inefficient investment levels adopts the simple (contentious) assumption that the networks' RABs are driven by two variables - customer numbers and peak demand.

The Grattan Institute's methodology appears to double count the need for increased demand presented by new customers and does not appear to reflect the economies of scale of network infrastructure

The Grattan Institute's calculated range of RAB write downs are highly sensitive to the study period start and end dates (more so than other studies)

8.3 The Gaming Of Excessive Operational Expenditure (Opex) Allowances

The Queensland networks are amongst the least efficient networks in the National Electricity Market (NEM):

- Powerlink Queensland is the most inefficient transmission network in the NEM³⁷
- Ergon Energy is the second least efficient distribution networks in the NEM³⁸

The Queensland networks' poor operational efficiency and productivity has been the subject of extensive criticism in numerous reports and reviews.³⁹

Over the past decade, the Queensland networks have managed to prevent the AER from applying benchmarking when setting their opex allowances, resulting in the AER setting the networks' opex allowances on the basis of their historical costs, rather than efficient costs.⁴⁰

This resulted in the following outcomes in the networks' most recent revenue determinations:

- The AER fully accepted Energex's proposed opex, despite the AER's benchmarking identifying that Energex's opex is 35-40% above the benchmark efficient level
- The AER only applied a 5% reduction to Ergon Energy's proposed opex, despite the AER's benchmarking identifying the need for reductions of 55-60%
- The AER fully accepted Powerlink's proposed opex, despite the AER's benchmarking identifying that Powerlink's opex is around twice the efficient level

As a result, the Queensland electricity networks' total opex allowances over their current 5-year regulatory periods are \$2.25 billion (\$450 million per annum) above the efficient level.

³⁷ Powerlink's MTFP is ranked 5th out of the 5 NEM transmission networks – see AER 2017 Transmission Benchmarking Report, 2nd December 2017

³⁸ Ergon Energy MTFP is ranked 12th out of the 13 NEM distribution networks – see AER 2017 Distribution Benchmarking Report, 2nd December 2017

³⁹ For example:

Assets or Liabilities? The Need to Apply Fair Regulatory Values to Australia's Electricity Networks, Hugh Grant, 5th May 2016

Senate Inquiry Into The Performance and Management of Electricity Network Companies, June 2015

Victorian Electricity Distribution Businesses Submission to the Senate Select Committee Inquiry into the performance and management of electricity network companies, 18th December 2014

Queensland Government Independent Review Panel (IRP) on Network Costs, Final Report, 2013

Electricity Network Regulatory Frameworks: Productivity Commission Inquiry Report, 9 April 2013

Senate Select Committee on Electricity Prices: Reducing Energy Bills and Improving Efficiency

Down to the wire: A sustainable electricity network for Australia, Grattan Institute, 25 March 2018

A comparison of outcomes delivered by electricity transmission network service providers in the NEM, EUAA, 2012

Australia's rising prices and declining productivity: the contribution of its electricity distributors, EUAA, 2011

Shock to the system: Dealing with falling electricity demand, Grattan Institute, December 2013

Putting the customer back in front: How to make electricity cheaper. Grattan Institute, December 2012

The Garnaut Climate Change Review Update, Paper 8: Transforming the Electricity Sector, 2011

The Energy Market Death Spiral - Rethinking Customer Hardship, Paul Simshauser and Tim Nelson, 2012

Write-downs to address the stranded assets of electricity networks in the National Electricity Market: evidence and argument CME, April 2015

AMP Submission to the Productivity Commission - The Capital Efficiency of Australian Electricity Distributors, Results of a Benchmarking Study, November 2012

Utilities Policy: Independent Regulation of Government-Owned Monopolies: An Oxymoron?, December 2014

⁴⁰ See for example, Ergon Energy Intervention to the Ausgrid, Endeavour Energy and Essential Energy Limited Merits Review (LMR) Appeal on the AER's 2014-19 revenue determination for the NSW distributors

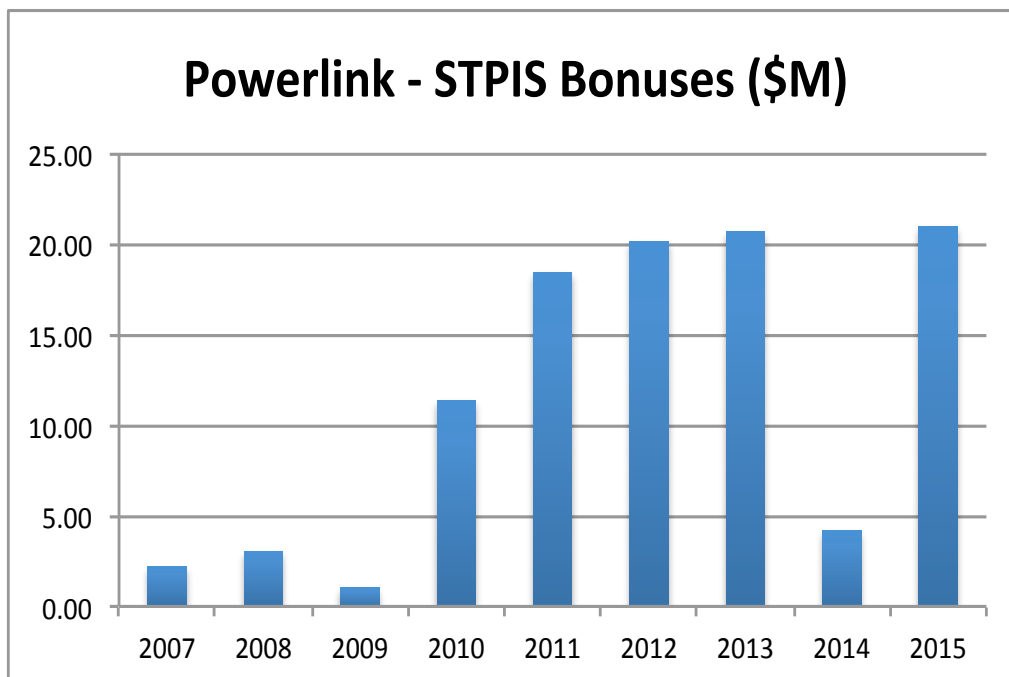
8.4 The Queensland Networks' Gaming Of The AER's Incentive Schemes

Over the past decade, the AER has implemented various incentive schemes aimed at incentivising the networks to improve their performance and efficiency.

All of those schemes have demonstrably failed to meet their objectives.

Rather, the Queensland networks have realised extraordinary windfall profits from gaming the various schemes, by taking advantage of information asymmetries and negotiating incentive scheme targets well above the efficient levels.

For example, the chart below outlines the asymmetric outcomes of the AER's *Service Target Performance Incentive Scheme (STPIS)* – under which Powerlink has achieved major bonuses in every year, and has not incurred any penalties since the scheme was implemented.⁴¹



9 Business As Usual is Unsustainable

Queensland's excessive electricity prices are inflicting major damage on the Queensland community and the Queensland economy.

In response to the dramatic increases in electricity prices, Queensland consumers are exhausting all opportunities to reduce their electricity costs.

In addition to reducing consumption, Queensland consumers are increasingly investing in self-generation, thereby further reducing the energy being delivered by the Queensland networks.

For example, residential consumers are increasingly investing in solar PV and battery storage systems to reduce or remove their reliance on grid supplied electricity.

Similarly, Queensland's industrial consumers are increasingly moving to self-generation and Queensland's irrigators are pursuing inefficient technology substitutions such as moving to the use of diesel pumps rather than electrical pumps.

Whilst these decisions are justified on the basis of current electricity prices, many of the decisions are actually economically inefficient as they are based on pursuing alternatives to artificially inflated electricity prices.

The Queensland networks are responding by further increasing their prices to recover their guaranteed revenues over a reduced level of consumption.

Consequently, Queensland's excessive network prices are driving ongoing demand reductions and accelerating the industry death spiral - i.e. as the move towards self generation increases, the burden of paying for the networks' costs is being progressively placed on a reducing consumer base until those consumers can no longer afford to stay connected to the network.

Continuation of the industry death spiral will ultimately be much more destructive to the value and future viability of Queensland's government-owned energy companies than the short-term impacts of implementing more sustainable prices.

It is clearly irresponsible and foolhardy to continue to allow Queensland's state budget to be so heavily dependent upon the extraction of unsustainable profits from Queensland's monopoly electricity networks.

It is clear from the various policies proposed by Queensland's political parties that there is broad political awareness that business as usual is unsustainable.

The Queensland community is becoming increasingly aware of the real reason for Queensland's excessive electricity prices and is becoming increasingly vocal in letting Queensland's political leaders know that they will no longer be played as fools.

The new delicately balanced Queensland parliament provides an opportunity for the new Queensland Government to seriously address the key driver of Queensland's excessive electricity prices and reduce the Queensland state budget's dependence on unsustainable profits from Queensland's monopoly electricity networks.

10 Policy And Regulatory Implications

10.1 The Need to Set The Queensland Networks' Prices At Efficient Levels

As owner of the Queensland networks, the Queensland government has a high degree of control over their prices.

Rather than continuing to allow the Queensland networks to game the national regulator and charge prices over twice the efficient levels, the Queensland Government needs to exercise that control and ensure that the networks' prices are set at efficient levels.

As outlined in the recent Grattan institute report, the Queensland government needs to take responsibility and address the Queensland networks' excessive prices.⁴²

"We find that fault lies predominantly with successive state governments"

"State government's can't turn back the clock but they can fix the mistakes of the past. And they should, because if they don't, consumers will be paying for decades to come".

The Australian Energy Regulator (AER) sets a limit on the maximum revenues the Queensland networks are allowed to collect from their customers. The networks have complete autonomy regarding the actual revenue they collect, as long as their total revenue does not exceed their maximum revenue caps.

Decisions to collect revenues below the networks' maximum revenue caps are not unusual and have been made by various network owners (including previous Queensland governments) in recent years.

For example, the NSW government recently directed Essential Energy (the NSW government-owned distribution network) to set its prices at 34% below the level that Essential Energy managed to game from the national regulatory framework.

Importantly, the NSW government made that direction in response to NSW community outrage following the leaking of a document that confirmed that Essential Energy cynically exploited its consumers, the regulator and the Australian legal system in its pursuit of excessive profits.

Over the past two years, Essential Energy spent millions in legal fees (funded by consumers) securing higher revenue through legal appeals to the Australian Competition Tribunal and the Federal Court. During those legal battles, Essential Energy made numerous non-credible claims that lower revenues would result in catastrophic consequences and compromise the safety, security and reliability of the network.

However, in October 2017, the NSW opposition uncovered a briefing document from Essential Energy to the NSW Government that strongly contradicted those claims. In that document, Essential Energy acknowledged that the extra revenue it had repeatedly insisted was necessary was actually unnecessary, and would simply result in significant additional profits for the company.

As outlined within this paper, successive Queensland governments have also been complicit in enabling the Queensland networks to exploit Queensland consumers in their pursuit of excessive profits.

The Queensland community is becoming increasingly aware of the real reason for Queensland's excessive electricity prices and increasingly vocal in letting Queensland's political leaders know that they will no longer be played as fools.

⁴² Down to the wire: A sustainable electricity network for Australia, Grattan Institute, 25 March 2018

10.1.1 Assessment of Efficient Network Prices

Efficient prices can be defined as:

Prices based on revenues that provide for:

- *Reasonable returns on efficient investments; and*
- *The recovery of efficient costs*

The charts overleaf provide an indication of the differences between the Queensland networks' current revenues and efficient revenues.

The estimations of efficient revenues are based on the conclusions of various independent analyses and reviews of the Queensland networks' revenues and costs.⁴³

The charts outline the different revenues that would apply if the networks were to remain as "for profit" entities and the revenues that would apply if the networks were to be reverted to "non-profit" entities (as currently being proposed by some Queensland political parties).

⁴³ Assets or Liabilities? The Need to Apply Fair Regulatory Values to Australia's Electricity Networks, Hugh Grant, 5th May 2016
Senate Inquiry Into The Performance and Management of Electricity Network Companies, June 2015
Victorian Electricity Distribution Businesses Submission to the Senate Select Committee Inquiry into the performance and management of electricity network companies; 18th December 2014
A comparison of outcomes delivered by electricity transmission network service providers in the NEM, EUAA, 2012
Australia's rising prices and declining productivity: the contribution of its electricity distributors, EUAA, 2011
Down to the wire: A sustainable electricity network for Australia, Grattan Institute, 25 March 2018
Shock to the system: Dealing with falling electricity demand, Grattan Institute, December 2013
Putting the customer back in front: How to make electricity cheaper. Grattan Institute, December 2012
The Garnaut Climate Change Review Update, Paper 8: Transforming the Electricity Sector, 2011
The Energy Market Death Spiral - Rethinking Customer Hardship, Paul Simshauser and Tim Nelson, 2012
Write-downs to address the stranded assets of electricity networks in the National Electricity Market: evidence and argument CME, April 2015
AMP Submission to the Productivity Commission - The Capital Efficiency of Australian Electricity Distributors, Results of a Benchmarking Study, November 2012
Utilities Policy: Independent Regulation of Government-Owned Monopolies: An Oxymoron?, December 2014
Electricity Network Regulatory Frameworks: Productivity Commission Inquiry Report, 9 April 2013
Senate Select Committee on Electricity Prices: Reducing Energy Bills and Improving Efficiency
Queensland Government Independent Review Panel (IRP) on Network Costs, Final Report

The key assumptions underlying the estimates include:

Current Revenue Allowances

The “current revenue allowances” reflect the AER’s average annual revenue allowances over the next three financial years (2017/18-2019/20) ⁴⁴

Efficient Revenue Allowances (For Profit Scenario)

Key assumptions include:

- The ongoing application of the Capital Asset Pricing Model (CAPM) approach
- The ongoing assumption of 60%/40% debt/equity gearing ratios
- Acceptance of the AER’s ‘risk free rate’ calculations
- An equity risk premium (ERP) of 2% based on a market risk premium of 5% and an equity beta of 0.4
- Debt risk premiums (DRPs) of 1% below the AER’s applied debt risk premiums
- The estimations of efficient regulated asset bases (RABs) are based on the conclusions of various independent analysts that the networks’ current RABs are at least twice the efficient levels
- The estimations of efficient opex allowances are based on the “benchmark efficient costs” as per the AER’s benchmarking reports ⁴⁵

Efficient Revenue Allowances (Not For Profit Scenario)

The key assumptions are as per the “for profit” scenario, except:

- The networks are assumed to be 100% debt funded
- A debt risk premium (DRP) of 1.25% has been provided to provide an allowance for the networks’ specific non-diversifiable financial risks ⁴⁶
- No tax allowances are provided

The charts highlight that:

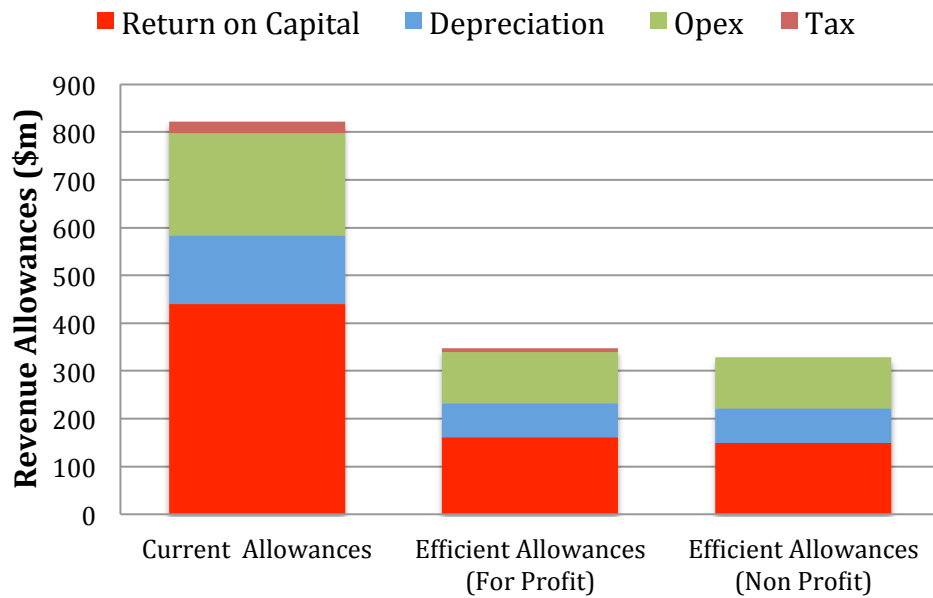
- If the networks are to remain as “for profit” entities, the Queensland networks’ current revenues are 2.3-2.4 times the efficient level
- If the networks are to be reverted to “non profit” entities (as proposed by some Queensland political parties), the Queensland networks’ current revenues are around 2.4-2.5 times the efficient level

⁴⁴ All revenue allowances exclude the AER’s calculated “additional amounts in DUOS” - the majority of those costs have been removed from the Queensland distributors’ revenues as per the Queensland Government’s June 2017 state budget announcement – available at <https://budget.qld.gov.au/budget-highlights/powering-queensland/>

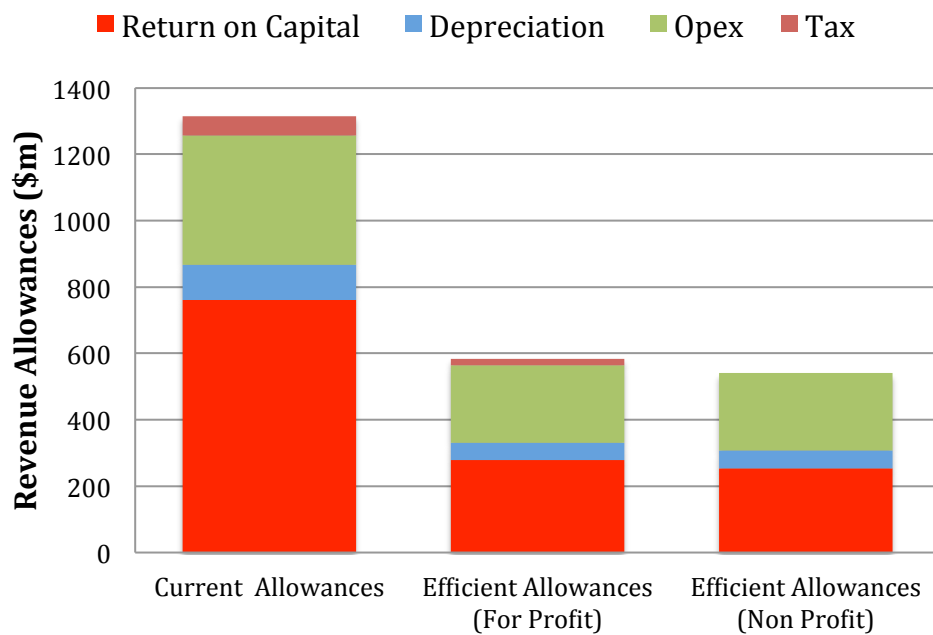
⁴⁵ AER Transmissions and Distribution Benchmarking Reports

⁴⁶ This approach is common in the determination of returns for government owned businesses. See for example: “Economic Regulation in Australia: the Case of the New South Wales Gas”. Abbot, M and Xiaoyong Economic Papers, Vol 36, No. 3 “The regulation of government owned electricity distributors in Australia”, Bruce Mountain, Journal of Regulatory Economics, December 2017

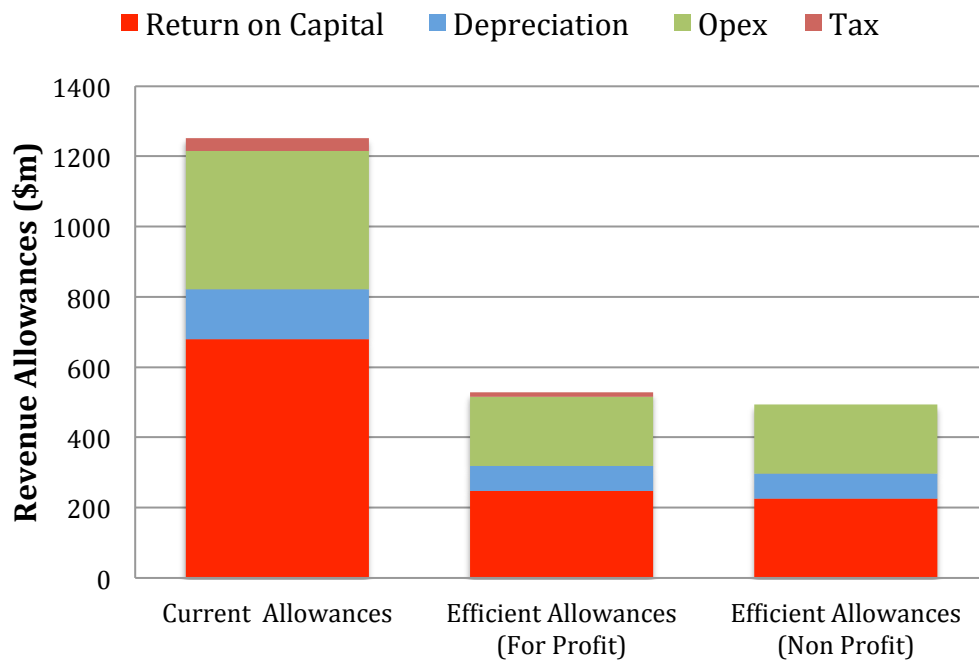
Powerlink Queensland



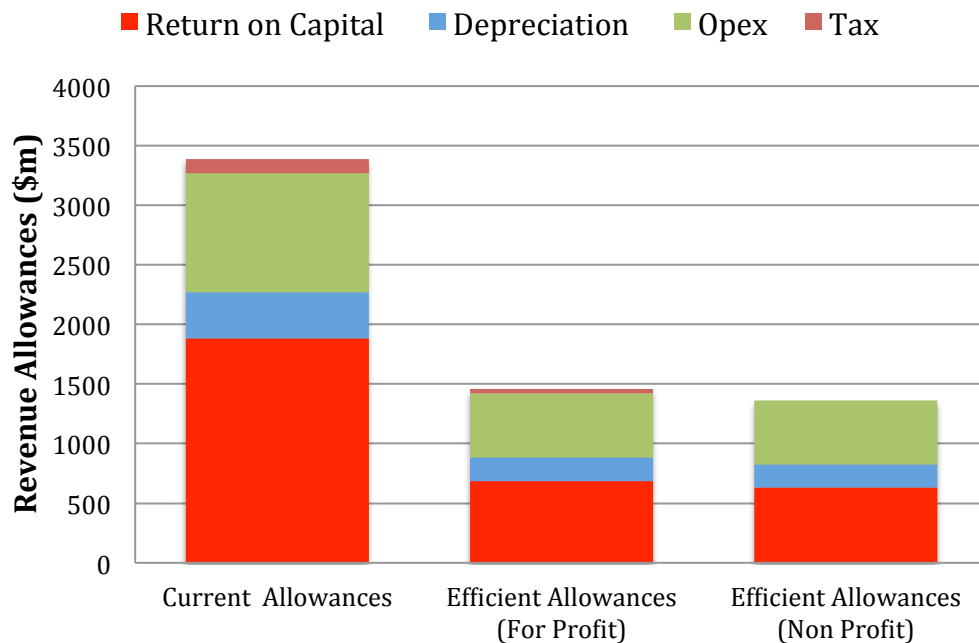
Energex



Ergon Energy



Queensland Networks Total



10.1.2 The Queensland Political Parties' Policies To Reduce The Networks' Prices

Queensland's political parties are currently proposing various policies aimed at reducing the Queensland networks' prices and profits.

Appendix 3 of this report provides an assessment of those policies and the extent to which they would drive the Queensland networks' prices towards efficient levels.

The table below highlights the Queensland political parties' key policies and the estimated potential network price reductions that would arise from their implementation.

Political Party	Policies To Address Excessive Profits	Policies To Drive Efficient Costs	Potential Price Reductions
Labor	\$50 "electricity asset ownership dividend payment" for Queensland households	-	3%
Liberal National Party (LNP)	Write -downs of the networks' regulatory asset bases (RABs) ⁴⁷	Appoint consumer representatives to the networks' boards Tie executive bonuses to price reductions	20%
One Nation Party	20% reduction from removal of dividend payments	-	20%
Katter's Australian Party	Implementation of "recovery only" pricing Abolishment of DORC valuation methodology	Reversion to state based regulation	60%
Queensland Greens	Reversion to non profit entities	Reversion to state based regulation	60%

⁴⁷ On 3 April 2018, the LNP Leader (Deb Frecklington) endorsed the findings and recommendations of the Grattan Institute Paper – "Down to the wire: A sustainable electricity network for Australia, Grattan Institute, March 2018"
The Grattan Institute paper calculated a range of RAB write downs for the Queensland electricity networks based on various assumptions. The estimated price reductions are based on the Grattan Institute's calculated RAB write-downs of \$2.5bn (38%) for Powerlink Queensland, \$3.9bn (33%) for Energex and \$2.8bn (26.3%) for Ergon Energy

It is clear from the various policies proposed that there is a broad political awareness that business as usual is unsustainable.

The new delicately balanced Queensland parliament provides an opportunity to seriously address the key driver of Queensland's excessive electricity prices and reduce the Queensland state budget's dependence on unsustainable profits from Queensland's monopoly electricity networks.

10.2 The Impacts Of Implementing Efficient Prices On The Queensland Budget

Critics of calls to set the Queensland networks' prices at efficient levels tend to make shortsighted claims regarding the impact on the Queensland state budget.

Such responses reflect a very narrow and short-term view of the issues and ignore the major damage that Queensland's excessive electricity prices are inflicting on the Queensland community and the state economy.

Furthermore, by acknowledging the difficulty of addressing the problem, such responses are actually confirming the unsustainability of the Queensland budget's dependence on the monopoly networks' excessive profits, highlighting that that 'business as usual' is unsustainable.

Clearly we cannot undo the mistakes of the past, but we can prevent them from being repeated in the future.

10.3 Is The 'Profit Motive' Necessary To Deliver Efficient Prices?

Critics of the Queensland political parties' proposals to revert the Queensland monopoly networks to "non-profit" entities are likely to claim that the 'profit motive' is essential to deliver efficient prices.

Such criticisms need to be evaluated in light of the extensive counterfactual evidence.

Since responsibility for the regulation of the Queensland networks' revenues was transferred to the national regulatory framework in 2006, the Queensland networks' efficiency levels have declined dramatically and their productivity levels are the lowest in the National Electricity Market (NEM).

During that period, the networks profitability levels increased dramatically.

It is clear from the evidence that the effectiveness of the regulatory framework is a much stronger determinant of the networks' efficiency levels than whether or not they have a profit motive.

10.4 The Need For Government-Owned Networks To Be Regulated By Their Government Owners

As demonstrated throughout this report, the transfer of the Australian networks' revenue regulation to national regulation (by the Australian Energy Regulator (AER)) has been a catastrophic failure.

Although the deficiencies in the national regulatory framework apply to both publicly and privately owned networks, it is well understood that the publicly owned networks have exploited the deficiencies to a much higher degree than the privately owned networks.

As a result, the state government-owned networks' prices are over twice the efficient level, whereas the privately owned networks' prices are around 30-40% above efficient levels.

In essence, the national regulatory framework was designed for private ownership and has been unable to prevent government owned networks (with their access to low-cost finance) from exploiting the incentives for overinvestment and gold plating, and profiting from their inefficiencies.

As outlined above, the Queensland Government has been the most proactive state government in constraining the AER's powers and ensuring the retention of the deficiencies in the national regulatory framework.

Over the past decade, successive Queensland governments have worked with other state governments (through COAG) to create a highly deficient regulatory framework that involves:

- A regulatory rule maker (the Australian Energy Market Commission (AEMC)) with a strong bias towards the network businesses' interests at the expense of consumers' interests, and
- A toothless regulator (the Australian Energy Regulator (AER)) with a narrowly defined and constrained role and limited powers

These arrangements are unique to Australia, and have conveniently enabled successive Queensland Governments to deflect the blame for the networks' price increases to an "independent national regulator".

It is therefore not surprising that the Western Australian electricity network, Western Power, was so enthusiastic regarding recent proposals to transfer its revenue regulation to the national regulatory framework, as the Western Australian regulator (the ERA) has much stronger powers than the AER.

As outlined within this report, some Queensland political parties are proposing to revert to Queensland Government controlled revenue regulation for the Queensland networks, as applied prior to 2006, and as currently applies to state-owned electricity networks in comparable federal countries including the United States, Canada and Germany.

Although Queensland Government controlled network revenue regulation will not be immune from political interference, the practical reality is that providing single point accountability to the Queensland government for the networks' prices and profits is much more likely to deliver efficient network prices than continuing to place false hope that future state governments will progress the numerous long-overdue reforms to the deeply flawed national regulatory framework.

10.5 The Need To Restrict The Queensland Government's Income Extractions To Sustainable Levels

As outlined throughout this report, successive Queensland governments have extracted income from the Queensland networks at unsustainable levels. There is a need for stronger fiscal controls that make it more difficult for future Queensland Governments to extract unsustainable levels of income from the Queensland networks.

The unsustainability of the Queensland government's income extractions was highlighted in the Queensland Audit Office's (QAO) recent audit of the Queensland energy companies' 2015-17 finances. As stated by the Queensland Audit Office: ⁴⁸

The Queensland Government continues to require a dividend of 100 per cent of energy net profits after tax for all entities except CS Energy. During the last two years, a mixture of net profit after tax and special dividends have been paid to the state government using cash and additional borrowings, through realised accumulated earnings and unrealised asset revaluation reserves. While this continues, there is a risk of depleting cash and reserves, resulting in a limited ability to fund future dividends with increased debt."

⁴⁸ Energy: 2016-17 results of financial audits, Report 9 (2017-18), Queensland Audit Office, February 2018

Furthermore, future Queensland Governments should cease the practice of extracting competitive neutrality fees from the networks.

The Queensland Government's rationale for extracting competitive neutrality fees from the networks is based on a flawed application of the Competition Principles Agreement (CPA).

The CPA is intended to apply to government-owned entities that operate in competitive industries. However, the Queensland networks are monopoly businesses that have no competitors. Consequently, extracting competitive neutrality fees from the Queensland networks serves no purpose and simply imposes unnecessary costs on Queensland consumers whilst delivering no benefits.

10.6 The Need For Improved Oversight Of The Queensland Networks

Successive Queensland Governments have had a "hands-off" approach to the governance of the Queensland networks.

This lack of oversight has resulted in the Queensland networks exploiting loopholes and deficiencies in the national regulatory framework, pursuing outcomes that are not in Queensland consumers' long-term interests.

There is a need for much stronger oversight of the Queensland network businesses, to ensure that their actions better reflect Queensland consumers' long-term interests.

In May 2016, the Queensland Productivity Commission (QPC) made a number of recommendations for improvements to the GOC shareholder oversight role, aimed at ensuring that the Queensland networks are held more accountable for their performance and efficiency.

Despite the Queensland Government stating that it accepted most of those recommendations, there is no evidence that any improvements to the governance of the Queensland networks have been progressed over the past 2 years.

11 Recommendations

Recommendation 1. Set The Queensland Networks' Prices At Efficient Levels

As owner of the Queensland networks, the Queensland government has a high degree of control over their prices.

Rather than continuing to enable the Queensland networks to game the national regulator and charge prices over twice the efficient levels, the Queensland Government needs to exercise that control and ensure that the networks' prices are set at efficient levels.

The Australian Energy Regulator (AER) sets a limit on the maximum revenues the Queensland networks are allowed to collect from their customers. The networks have complete autonomy regarding the actual revenue they collect, as long as their total revenue does not exceed their maximum revenue caps.

Decisions to collect revenues below the networks' maximum revenue caps are not unusual and have been made by various network owners (including previous Queensland governments) in recent years.

For example, the NSW government recently directed Essential Energy (the NSW government-owned distribution network) to set its prices at 34% below the level that Essential Energy managed to game from the national regulatory framework.

Importantly, this paper outlines that the NSW government made that direction in response to the NSW community's outrage following the leaking of a document that confirmed that Essential Energy had cynically exploited its consumers, the regulator and the Australian legal system in its pursuit of excessive profits.

The Queensland community is becoming increasingly aware of the real reason for Queensland's excessive electricity prices and increasingly vocal in letting Queensland's political leaders know that they will no longer be played as fools.

The new delicately balanced Queensland parliament provides an opportunity for the new Queensland Government to seriously address the key driver of Queensland's excessive electricity prices and reduce the state budget's dependence on unsustainable profits from Queensland's monopoly electricity networks.

Importantly, setting the Queensland networks' revenues at levels below their maximum revenue caps can be implemented immediately and does not require any changes to the national regulatory framework.

Critics of calls to set the Queensland networks' prices at efficient levels tend to make short-sighted claims regarding the impact on the Queensland state budget. Such responses reflect a very narrow and short-term view of the issues and ignore the major damage that Queensland's excessive electricity prices are inflicting on the Queensland community and the state economy.

Setting Queensland's electricity prices at efficient levels will:

- Minimise further hardship for residential consumers
- Restore the international competitiveness and viability of Queensland industry
- Improve the long-term viability of the Queensland electricity supply chain
- Protect the Queensland Government owned energy companies from the value destruction that will inevitably arise from the continuation of the network death spiral

Recommendation 2. Revert To Queensland Government Controlled Regulation For The Queensland Networks

As currently being proposed by some Queensland political parties, there is a need to revert to Queensland Government controlled revenue regulation for the Queensland networks - as applied prior to 2006, and as currently applies to state-owned electricity networks in comparable federal countries.

Although Queensland Government controlled network revenue regulation will not be immune from political interference, the practical reality is that providing single point accountability to the Queensland Government for the networks' prices and profits is much more likely to deliver efficient network prices than continuing to place false hope that future state governments will progress the numerous long-overdue reforms to the deeply flawed national regulatory framework.

Queensland controlled regulation should be designed to avoid the deficiencies in the existing national regulatory framework outlined within this report.

Recommendation 3. Implement Fiscal Controls That Restrict The Queensland Government's Income Extractions to Sustainable Levels

The Queensland Government is extracting income from the Queensland networks at unsustainable levels.

There is a need for stronger fiscal controls that make it more difficult for future Queensland Governments to extract unsustainable levels of income from the Queensland networks.

Furthermore, the Queensland Government should cease the practice of extracting competitive neutrality fees from the networks. This paper demonstrates that the Queensland Government's rationale for extracting competitive neutrality fees from the networks is based on a flawed application of the Competition Principles Agreement (CPA) and that it serves no purpose, imposing unnecessary costs on Queensland consumers whilst delivering no benefits.

Recommendation 4. Implement Strengthened Oversight Of The Queensland Networks

Successive Queensland Governments have had a "hands-off" approach to the governance of the Queensland government owned networks, enabling the networks to exploit loopholes and deficiencies in the national regulatory framework, pursuing outcomes that are not in Queensland consumers' long-term interests.

The Queensland Government needs to implement improved governance arrangements for the Queensland networks to ensure that they better reflect the Queensland communities' long-term interests. This should include:

- Preventing the networks from collecting windfall profits from over-forecasting their needs
- Much stronger oversight of the Queensland networks' advocacy and lobbying activities – ensuring that they cease opposing or delaying reforms aimed at improving their performance and productivity
- Increased scrutiny and transparency of the Queensland networks' performance
- Setting and overseeing capital and operational efficiency improvement programs, with the objective of improving the Queensland networks' productivity from bottom-quartile to top-quartile performance within the shortest possible timeframe
- Segregated financial reporting of the networks' regulated and non-regulated business activities
- Improved transparency of the directions being provided to the Queensland networks by the Queensland Energy Minister and Queensland Treasury

Appendix 1 Analysis Of The Queensland Networks' Profitability

This appendix provides a detailed analysis of the actual financial returns realised by two Queensland networks (Powerlink Queensland and Energex) over the 15-year period 1999/00 - 2013/14.

11.1 Definitions, Data Sources And Calculations

The profitability analysis involved the calculation of the two key returns that investors realise from their equity investments:

- Annual Income – calculated as the annual % return on shareholder equity
- Growth in Shareholder Equity – calculated as the growth in shareholder equity over the 15 year period

There are two recognised methods for expressing shareholder equity:

Book Value - calculated as the sum of shareholder contributions plus retained earning; and

Market value – calculated as share market valuation less debt

Both of those definitions are appropriate, dependent upon the context of their use.

This profitability analysis uses both of those methods as follows:

Annual Return On Equity Calculations

The Annual Return on Equity is the ratio (expressed in % terms) of the annual profit achieved by the business, divided by the equity investment, i.e.:

$$\text{Return on Equity} = \frac{\text{Net Profit After Tax (NPAT)}}{\text{Shareholder Equity}}$$

The profitability analysis uses the “book value” definition of equity when calculating the annual return on equity levels – i.e. the definition used by all Australian businesses outside of the energy network sector when calculating their annual return on equity levels.

Note - the “book value” of equity is sometimes referred to as “*shareholder contribution*”.⁴⁹

Using the book value (or shareholder contribution) definition ensures that the annual returns on the actual equity invested by the businesses are compared on an “apples for apples” basis.

Importantly, the return on equity calculations do not include the other pecuniary benefits that the Queensland Government realises from its investment in the networks (i.e. tax payments and competitive neutrality fees)

Growth In Shareholder Equity Calculations

The growth in shareholder equity is calculated using the “market value” definition of equity (i.e. business value less debt) – i.e. the definition commonly used by all Australian businesses outside of the energy network sector when calculating their changes in shareholder value.

⁴⁹ In the Queensland networks’ financial reports this is the sum of the networks’ “share capital” and “retained earnings”

Again, using that definition ensures that changes in shareholder value are compared on an “apples for apples” basis.

All data (e.g. NPAT, share capital and retained earnings) was taken directly from Powerlink and Energex’s audited annual financial reports over the analysis period.

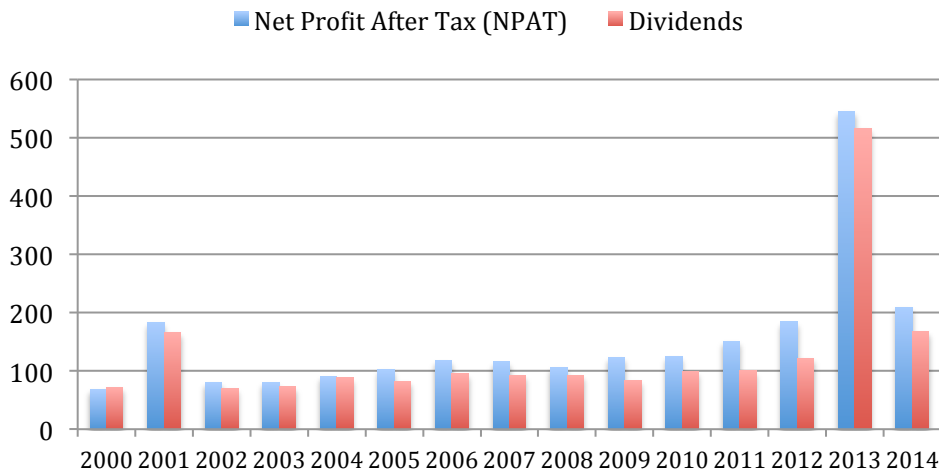
11.2 The Networks’ Actual Return On Equity

The charts overleaf illustrate the trends in the Queensland’s electricity networks’ profits, shareholder equity and actual ‘return on equity’ levels over the 2000-2014 period.

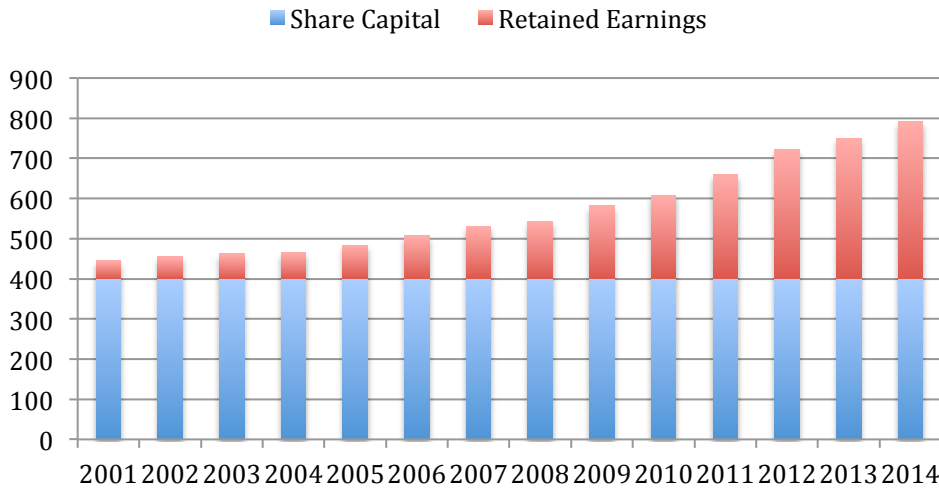
They highlight that:

- Powerlink Queensland achieved actual ‘return on equity’ levels of 18% to 75%, which amounted to 1.5 -8.1 times the AER’s theoretical return on equity levels
- Energex achieved actual ‘return on equity’ levels of 10.5% to 148%, which amounted to up to 13.5 times the AER’s theoretical return on equity levels
- By comparison, most ASX50 companies struggled to achieve annual ‘return on equity’ levels of 5% over that period
- Over the past 15 years the Queensland networks’ annual profits have grown strongly with major spikes in some years
- At no time over the past 15 years have the networks experienced low profits or losses (unlike all other businesses of their size)
- The networks consistently extracted very high dividend levels, with dividend payout ratios averaging around 90% - i.e. they have reinvested minimal amounts of retained earnings into the business
- By contrast, ASX50 businesses typically reinvest over 50% of their earnings
- The networks’ extraordinary growth levels have been predominantly funded by debt, e.g.:
 - Powerlink Queensland’s RAB grew fourfold with no change to its share capital of \$401 million
 - Energex’s RAB grew fourfold whilst Energex reduced its invested equity’ by \$175 million (from \$921million to \$746 million)
- Funding such levels of growth through debt would be impossible for businesses that operate in any other sector of the Australian economy
- The commercial constraints that apply to all other businesses would require significant levels of equity injection to fund such growth levels
- This demonstrates the uniqueness of the national regulatory framework and how it is disconnected from the commercial realities faced by businesses in all other sectors of the Australian economy

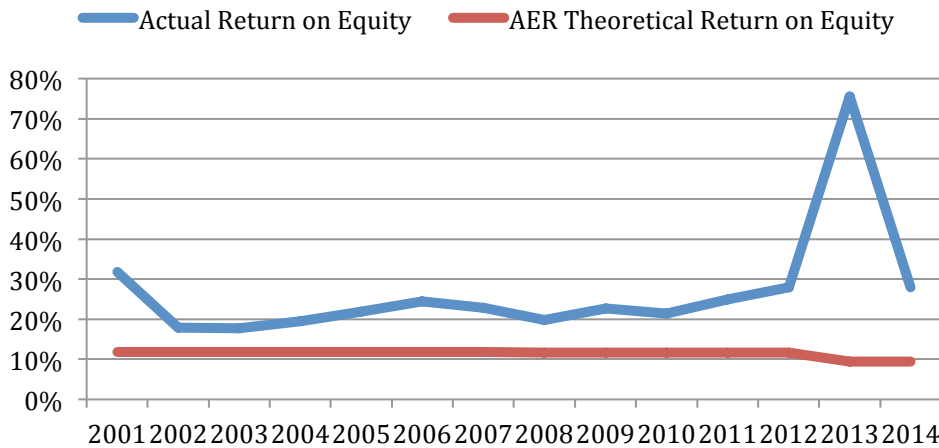
Powerlink Net Profit Trends



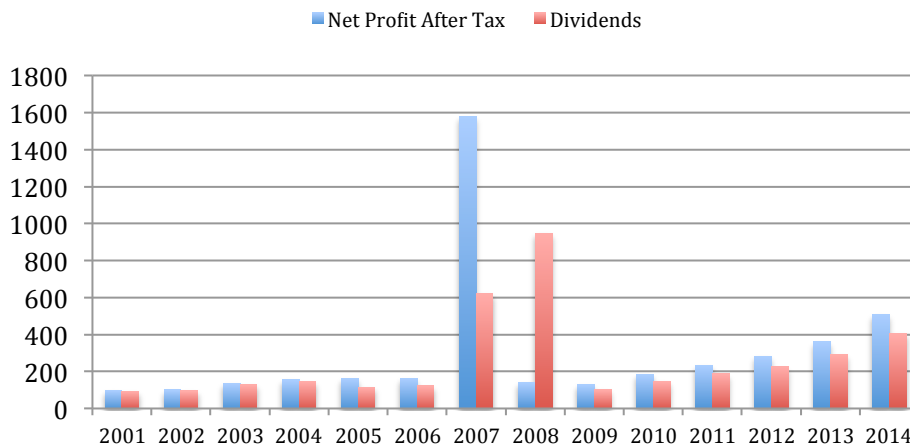
Powerlink Shareholder Equity Trends



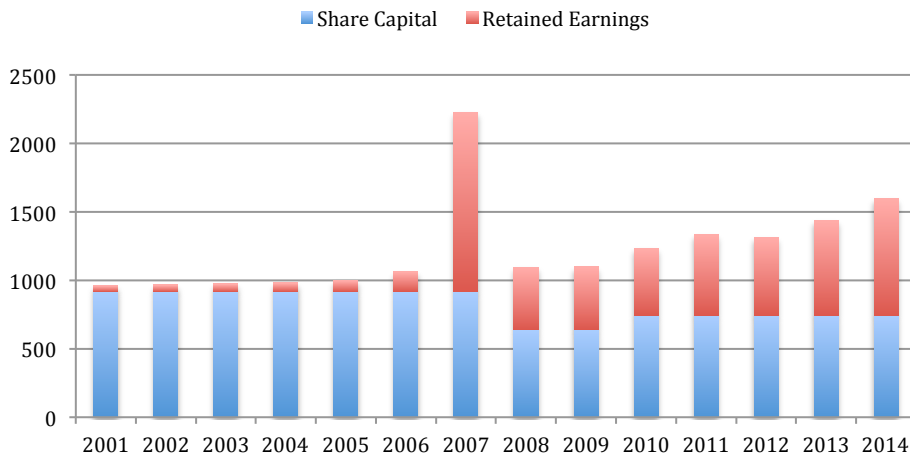
Powerlink Return on Equity



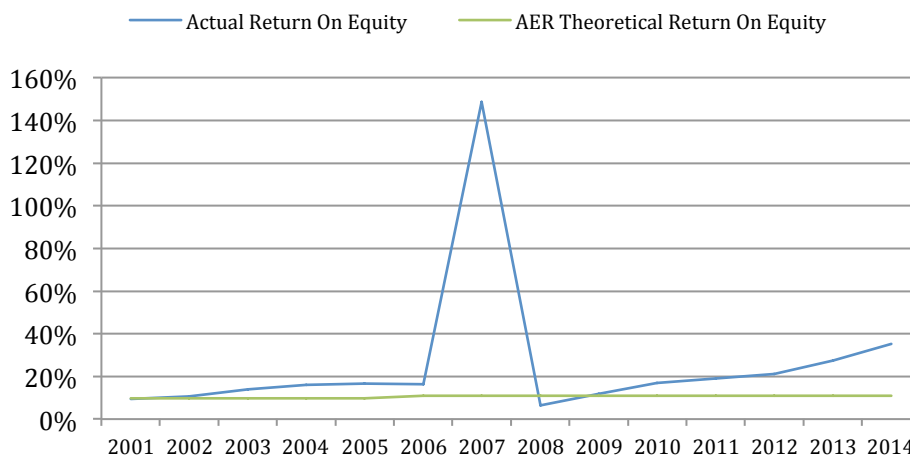
Energex Net Profit Trends



Energex Shareholder Equity Trends



Energex Return On Equity



11.3 Growth In Shareholder Equity

With Australia's electricity networks achieving such extraordinary returns, it is not surprising that investors are queuing up to purchase them when they come up for sale, paying well in excess of the networks' regulatory valuations.

11.3.1 Recent Electricity Network Sale Valuations

In recent years, the NSW Government sold its electricity networks at sale prices well above their regulatory valuations.

For example, in November 2015, the NSW transmission network (TransGrid), was sold for \$10.3 billion – a sale price that amounted to 165% of TransGrid's regulatory asset base (RAB) value. Similarly, the NSW government sold Endeavour Energy in May 2017 for 169% of its RAB value.

Importantly, during their recent revenue determinations, the NSW networks made many assertions that the AER's approach to determining their 'return on equity' allowances would not enable them to recover efficient financing costs or to attract equity investors – claiming that it would result in lower investment in the networks and significant increases in their financing risks.

The extraordinary sales prices achieved by the NSW networks make a mockery of those claims.

As all informed investors and industry analysts are aware, the statements that Australia's electricity networks make to regulators, policy makers and consumers are very different to their statements to investors.

For example, a review of the *Spark Infrastructure* equity investment prospectus for the TransGrid purchase outlines why investors are queuing up to pay such large premiums above the networks' regulatory values.⁵⁰

Informed investors and industry analysts were not in the least surprised that TransGrid sold for 165% of its regulatory valuation, as they know that the AER is currently providing investors with 'return on equity' allowances of around 3-4 times the level that they actually require to invest in the networks.⁵¹

The sale prices of the NSW networks provide a very strong indication of the market value of the Queensland electricity networks. A RAB multiple of 165% was used in the estimates of the Queensland networks' business values.

11.4 The Queensland Networks' Total Returns

The charts overleaf illustrate the total returns (income plus growth in shareholder equity) that the Queensland government has accrued from its investments in Powerlink Queensland and Energex over the 15-year period.

They illustrate that:

- The Queensland Government's \$401 million equity investment in Powerlink Queensland accrued total returns of around \$9.4 billion – i.e. 23 times the equity investment
- The Queensland Government's average equity investment of \$814 million in Energex over the period accrued total returns of \$17.8 billion - i.e. 22 times the equity investment

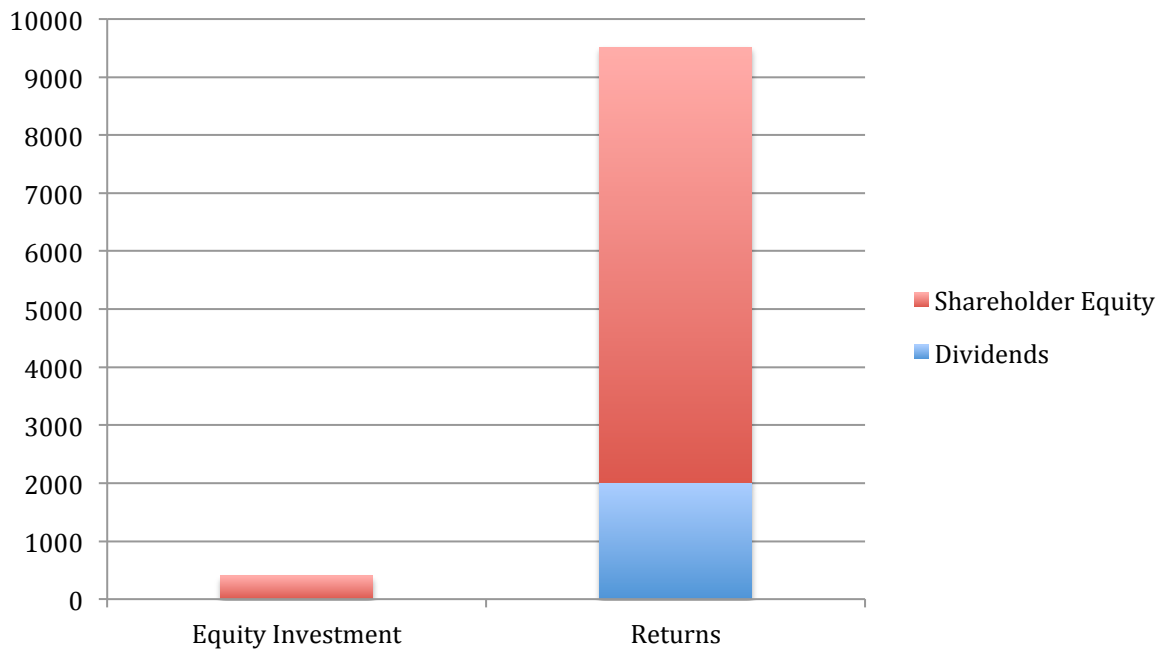
It is important to note that the Queensland networks are unlikely to have actually invested their reported "share capital". Consequently, the networks' actual 'return on equity' ratios are likely to be higher than the above ratios.⁵²

⁵⁰ Spark Infrastructure - Equity Investment in TransGrid and Equity Raising, 25 November 2015

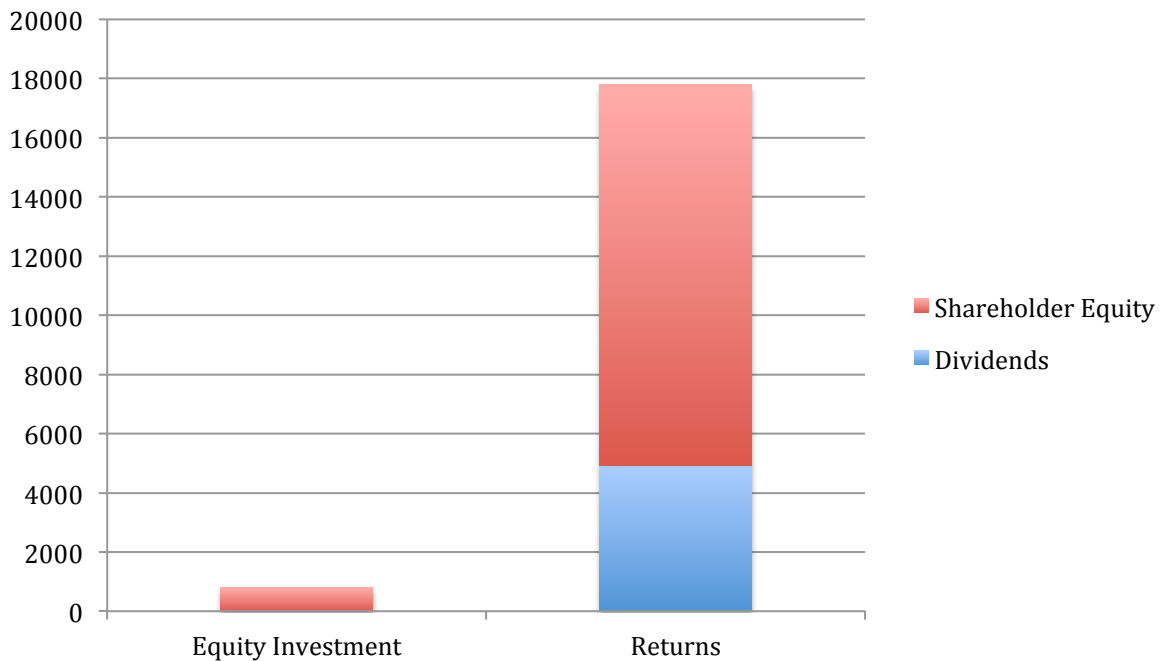
⁵¹ Assets or Liabilities – The Need To Apply Fair Regulatory Values To Australia's Electricity Networks, Hugh Grant, 5 May 2016

⁵² As above

Powerlink Queensland Return on Investment Over The Past 15 Years



Energex Return on Investment Over The Past 15 Years



- Shareholder Equity is calculated as Current Business Value less Current Debt
- Current Business Value has been calculated as 165% of RAB, as per the recent TransGrid sale

11.5 Comparing The Queensland Networks' Returns With Real World Returns

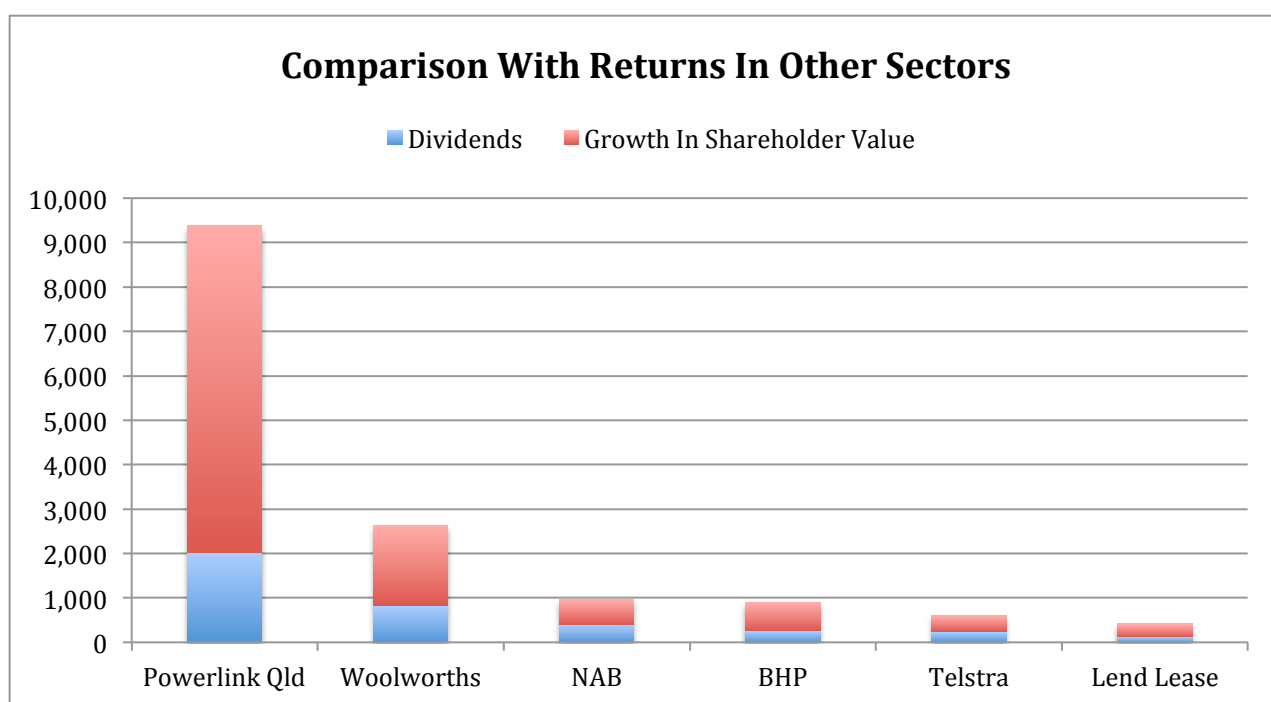
These are clearly extraordinary returns and represent many multiples of the returns that were achieved by Australia's best performing ASX100 entities over the period.

For example, the chart below compares the returns that the Queensland government is realising from its equity investment in Powerlink with the returns that it would have been achieved if it had invested the same equity in blue chip stocks in other sectors of the Australian economy.

It illustrates that over the past 15 years, the Queensland government's equity investment in Powerlink Queensland accrued total returns of:

- 23 times the returns achieved by the Australian construction sector (Lend Lease)
- 15.5 times the returns achieved by the Australian telecommunications sector (Telstra)
- 10.5 times the returns achieved by the Australian minerals and resources sector (BHP)
- 10 times the returns achieved by the Australian banking sector (NAB)
- 3.6 times the returns achieved by Australia's most profitable supermarket (Woolworths)

No ASX 100 stock came close to Powerlink's returns.



Note – the above chart actually understates Powerlink's returns, as:

- It does not include the other pecuniary benefits that the Queensland Government has realised from its investment in Powerlink (tax payments and competitive neutrality fees)
- The Queensland government is unlikely to have actually invested the reported "share capital" levels.⁵³

Importantly, those returns are being realised despite Powerlink being the most inefficient transmission network in the National Electricity Market (NEM).

Clearly those returns are grossly excessive and are not in Queensland consumers' long-term interest.

⁵³ Assets or Liabilities – The Need To Apply Fair Regulatory Values To Australia's Electricity Networks, Hugh Grant, 5 May 2016

Appendix 2 The Queensland Networks’ Systemic Over-Estimation of Load Growth

A key driver of the Queensland networks’ over-investment has been the networks’ systemic over-forecasting of demand.

Over the past decade, the Queensland networks’ demand forecasts have been significantly overblown.

Importantly, the Queensland networks’ have consistently over-forecasted their system demand to a much higher degree than the networks in all other states.

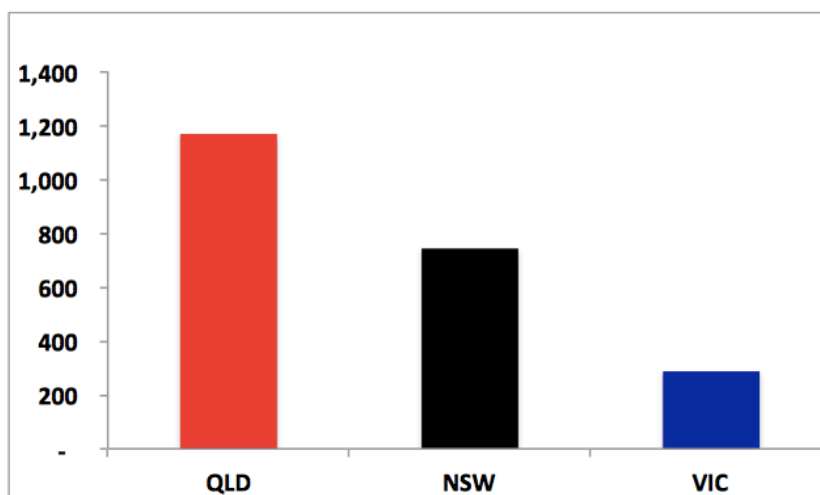
This was highlighted by the *Queensland Government Independent Review Panel on Network Costs*, which stated that:⁵⁴

- “Another factor contributing to the escalation in capital programs has been the **consistent over-estimation of demand by the NSPs**
- “The Panel also notes that the current **revenue cap control mechanism places volume risk on customers**”
- “Where demand is over-estimated, capital programs will be excess to requirements and **network tariffs to customers will increase during the regulatory control period to ensure the NSPs are able to recover the allowable revenue**”

Powerlink’s Over-Forecasting Record

The chart below, from the EUAA study into the demand forecasting records of Australia’s transmission networks, highlights that over the 2006-2012 period, Powerlink’s level of over-forecasting was four times higher than the Victorian over-forecasting level.⁵⁵

Figure 17. Average annual difference between projected and actual peak demand (MW) over the period from 2006/2007 to 2011/2012



⁵⁴ Queensland Government Independent Review Panel (IRP) on Network Costs, Final Report

⁵⁵ A comparison of outcomes delivered by electricity transmission network service providers in the National Electricity Market, EUAA 2012

The table below outlines the differences between Powerlink's 2013/14 peak demand forecasts and the actual peak demand that eventuated (just two years after the forecasts).⁵⁶

	2013/14 Medium Forecast (MW)	2013/14 Actual Peak Demand (MW)	Difference
Revenue Proposal			
10% POE	10,907	7,500	45% over estimate
50% POE	10,500	7,500	40% over estimate

Powerlink was rewarded with 'windfall profits' of around \$300 million during the 2012-17 regulatory period for its "forecasting errors", as its revenue allowances included returns on capital for forecast capex that it did not incur.⁵⁷

Energex and Ergon Energy's Over-Forecasting Record

Similarly, the demand forecasts used by the Queensland distributors to justify their record-high capex allowances for the 2010-15 regulatory period were also dramatically overblown. Rather than increasing significantly, as predicted by the distributors, peak demand and energy delivered both reduced during the period.

As outlined in the table overleaf, the Queensland distributors over-estimated their peak demand forecasts by 33.2-41.4%, and over-estimated their energy delivered forecasts by 14.2-25.2%.⁵⁸

	2015 Forecasts	2015 Actuals	Difference
Energex			
- Peak Demand	5,940 MW	4,200 MW	41.4 % over-estimation
- Energy Delivered	24,042 GWhrs	21,055 GWhrs	14.2% over-estimation
Ergon			
- Peak Demand	3,330 MW	2,500 MW	33.2% over-estimation
- Energy Delivered	16,874 GWhrs	13,496 GWhrs	25.2 % over-estimation

As a result, the Queensland distributors were rewarded with 'windfall profits' of around \$1 billion for those forecasting errors, as their 2010-15 revenue allowances included returns and depreciation on capex that they did not incur.⁵⁹

⁵⁶ AER Consumer Challenge Panel CCP6 (Hugh Grant) submission to the AER on Powerlink Queensland's 2017-22 Revenue Proposal

⁵⁷ AER Consumer Challenge Panel CCP6 (Hugh Grant) submission to the AER on Powerlink Queensland's 2017-22 Revenue Proposal "Electricity bills up in Queensland because of Powerlink overspend", Courier Mail Article, 5th Dec, 2011

⁵⁸ AER Consumer Challenge Panel CCP2 (Hugh Grant) Submission to the AER on Energex and Ergon 2015-20 Revenue Proposals, P18

⁵⁹ AER Consumer Challenge Panel CCP2 (Hugh Grant) Submission to the AER on Energex and Ergon 2015-20 Revenue Proposals, P19

Appendix 3 Assessment Of Potential Price Reductions Arising From The Queensland Political Parties' Policies

Over the past year Queensland's political parties have proposed various policies aimed at reducing the Queensland networks' prices and profits.

This appendix provides a critique of the Queensland political parties' current policies and the extent to which they would drive the Queensland networks' prices towards efficient levels.

The table below summarises the Queensland political parties' key policies and the estimated potential network price reductions that would arise from their implementation.

Political Party	Policies To Address Excessive Profits	Policies To Drive Efficient Costs	Potential Price Reductions
Qld Government	\$50 "electricity asset ownership dividend payment" for Queensland households	-	3%
Liberal National Party (LNP)	Write-down of the Queensland networks' regulatory asset bases (RABs) ⁶⁰	Appoint consumer representatives to the networks' boards Tie executive bonuses to price reductions	20%
One Nation Party	20% reduction from removal of dividend payments	-	20%
Katter's Australian Party	Implementation of "recovery only" pricing Abolishment of DORC valuation methodology	Reversion to state based regulation	60%
Queensland Greens	Reversion to non profit entities	Reversion to state based regulation	60%

⁶⁰ On 3 April 2018, the LNP Leader (Deb Frecklington) endorsed the findings and recommendations of the Grattan Institute Paper – "Down to the wire: A sustainable electricity network for Australia, Grattan Institute, March 2018" The Grattan Institute paper calculated a range of RAB write downs for the Queensland electricity networks based on various assumptions. The estimated price reductions are based on the Grattan Institute's calculated RAB write-downs of \$2.5bn (38%) for Powerlink Queensland, \$3.9bn (33%) for Energex and \$2.8bn (26.3%) for Ergon Energy

The assumptions underlying the estimated price impacts are as follows:

Queensland Government Policies

In relation to addressing the networks' excessive profits, the Queensland Government is proposing to provide a \$50 "*electricity asset ownership dividend rebate*" for each Queensland household. That commitment is restricted to household electricity bills and to the next two years only.

The Queensland government has costed the initiative at \$100 million per annum.

An assessment of the overall impact of the initiative on the networks' average prices (across all consumers) identifies that it would result in overall average network price reduction of around 3%.

The Queensland Government has not outlined any specific policies that would drive the networks' costs towards efficient levels.

Consequently, overall the Queensland Government's policies will potentially reduce the networks' average prices by around 3%.

Queensland Liberal National Party (LNP) Policies

In relation to addressing the networks' excessive profits, the LNP is proposing to write down the Queensland networks' regulated asset bases (RABs).

On 3 April 2018, the LNP Leader (Deb Frecklington) endorsed the findings and recommendations of the Grattan Institute paper, which called for the Queensland government to write-down the Queensland networks' regulatory asset bases (RABs).⁶¹

The Grattan Institute paper calculated a range of required RAB write-downs for the Queensland electricity networks based on various assumptions. The estimated price reductions are based on the Grattan Institute's calculated RAB write-downs of \$2.5bn (38%) for Powerlink Queensland, \$3.9bn (33%) for Energex and \$2.8bn (26.3%) for Ergon Energy.

Implementation of those write-downs would amount to a total reduction in the Queensland networks' charges of around 19%.

As outlined in chapter 8 of this report, the Grattan Institute adopted highly conservative assumptions in its assessment of the required RAB write-downs for the Queensland networks. Most other independent analysts have concluded that the Queensland networks' RABs are over twice the efficient level.

However, it is important to acknowledge that the *Queensland Liberal National Party (LNP)* proposal to write down the networks' RABs is the first such proposal from a dominant Queensland political party, reflecting a long overdue acknowledgement of the unsustainability of continuing to allow the Queensland networks' excessive RABs to drive their excessive prices and profits.

In relation to driving the networks' costs towards efficient levels, the LNP has proposed to put consumer representatives on the networks' boards and to tie the network executives' bonuses to price decreases.

There is a very high likelihood that those initiatives would be tokenistic and ineffective. To be effective they would need to be accompanied by much stronger governance arrangements that transform the culture of the organisations from a culture of profligacy and inefficiency to a culture of efficiency and customer focus

⁶¹ Down to the wire: A sustainable electricity network for Australia, Grattan Institute, March 2018y

However, this analysis has assumed that the LNP's initiatives would make a small contribution to facilitating the required cultural transformations and has assumed that they would result in a 1% reduction in the networks' prices.

Overall, the LNP's policies would therefore potentially reduce the networks' prices by around 20%.

One Nation Party

The One Nation Party promised to reduce Queensland's electricity prices by 20%, by ceasing dividend payments from the Queensland Government owned energy companies. Although the One Nation Party did not outline the calculations and mechanisms for achieving the 20% price reduction, this analysis simply accepts that the intent of One Nation's policy is to reduce the networks' prices by 20%.

Katter's Australian Party

The Katter's Australian Party proposed to revert the networks' pricing to "recovery only", and to abolish the application of the depreciated optimised replacement cost (DORC) asset valuation methodology.

The Katter's Australian Party did not define what it means by "recovery only" pricing. This analysis has assumed that it means the removal of profits from the networks' charges.⁶²

The Katter's Australian Party also proposed to revert to Queensland Government controlled network revenue regulation. If implemented effectively, robust Queensland Government controlled network revenue regulation would deliver further substantial reductions by restricting the networks revenue allowances to efficient costs only.

Subject to clarification of the Katter's Australian Party's definition of "recovery only" pricing, it has been assumed that their policies would potentially deliver the efficient prices outlined in Chapter 10 of this report— i.e. price reductions of up to 60%.

Queensland Greens

The Queensland Greens proposed to revert the networks back to non-profit public authorities, thereby removing profits from the networks' prices.

The Queensland Greens also proposed to revert to Queensland Government controlled network revenue regulation.

Consequently, the Queensland Greens' policies would also potentially deliver the efficient prices outlined in chapter 10 of this report – i.e. price reductions of up to 60%.

It is clear from the various policies proposed by Queensland's political parties that there is a broad political awareness that business as usual is unsustainable.

The new delicately balanced Queensland parliament provides an opportunity for the new Queensland Government to seriously address the key driver of Queensland's excessive electricity prices and reduce the Queensland state budget's dependence on unsustainable profits from Queensland's monopoly electricity networks.

⁶² As outlined in Section 10.1.1 of this report, a debt risk premium (DRP) of 1.25% has been provided to provide an allowance for the networks' specific non-diversifiable financial risks