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The Cost of Inaction

The impact of wholesale gas prices on average household power bills in Queensland, New South Wales and Victoria.

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Introduction

Few issues have resonated in Australian public discourse over the past few years like energy prices. Both household and business consumers have suffered the consequences of years of policy inertia, inconsistency and a lack of forward thinking by energy policy makers that have created a scenario in which Australians are significantly paying more, to power and heat their homes.

Wholesale gas prices play a central role in shaping household power prices, and current wholesale gas prices are significantly inflated, impacting businesses and household consumers. This report estimates the cost of policy inaction in gas to be significant. In 2017, households in New South Wales, Queensland and Victoria approximately paid \$151, \$175, and \$134 more respectively than they would have been if wholesale gas prices were at levels the ACCC had argued would be reasonable. Using ACCC advised figures of where the wholesale gas price should have been at in 2017, and with the Government's current policy-settings, by 2019 households in New South Wales, Queensland, and Victoria could be paying on average more than \$434.08, \$312.92, and \$254.09 respectively.

The National Energy Regulator in its May 2017 market update described the previous 12-18 months as 'some of the most challenging, Australia's energy sector has experienced since the National Electricity Market (NEM) was established in 1998'ⁱ. While energy policy is inherently complex, clarity around the drivers of higher energy prices has emerged. The escalating price of gas has driven power prices higher, and it has become increasingly clear to most observers that the shortfall of gas within Australia's energy market can and should be avoided to offset higher power prices.

This report identifies the patterns in household power prices across the Australian east coast energy grid at an electorate level, and the influence that forecast gas prices could have on future household energy prices, and the main drivers of escalating gas prices. Wholesale gas prices play a significant role in the retail price of electricity for households. Gas power plays an essential role in providing 'dispatchable' power, which often fills predicted shortfalls in electricity production during periods of high demand. Accordingly, when the gas price is high, household electricity prices tend to be higher.

The nature of price-setting in the wholesale gas market is such that few analysts can predict with certainty, the future course of gas prices. However, the engineered shortfalls in gas supply as a result of poor government policy and the commercial tactics of gas exporters in Australia in 2017 and 2018 have caused uncertainty, and have contributed to an overall higher price of wholesale gas. The ACCC noted in its September 2017 Gas Inquiry interim report that 'prices being offered are considerably higher than past levels, generally ranging from \$10–16/GJ over the first half of 2017' in wholesale marketsⁱⁱ.

In some instances however, gas consumers have been offered prices of up to \$22/GJⁱⁱⁱ. Compared with some foreign markets, this is notably higher. The ACCC estimated median prices in Asian markets were around \$5.87/GJ, and that ideally, spot netback prices in the Queensland market should be between \$6.29 and \$7.77/GJ.

Clearly, there is a problem with Australia's gas market, as prices exceed benchmarks and rise significantly above market rates seen elsewhere around the world. It is ironic that Australia, as the eminent world leader in gas exports, is subject to the world's highest gas prices. This report aims to determine the impact that potential rises in wholesale gas prices will have on Australian household electricity prices, finding that increases in gas prices will impact household power bills significantly, and argues that the Commonwealth government must do everything in its power to return certainty to Australia's domestic gas market to put downward pressure on wholesale prices. It notes that, although the Commonwealth have announced minor interventions in the gas market, further action would be required to guarantee domestic supply is met, and downward pressure on gas prices is set in place.

Key Findings

- Household energy prices across electorates in Queensland, New South Wales and Victoria will continue to rise until the end of 2019 under current forecast price and consumption trends without a significant reduction in the wholesale gas price.
- The ACCC believes that wholesale gas prices on the East Coast of Australia should be between \$6.30/GJ and \$7.80/GJ. Currently, the wholesale gas price is inflated, at an average price of above \$9/GJ, with many industrial users being offered prices of \$16-\$22/GJ.
- Accordingly, households in New South Wales, Queensland and Victoria are already paying approximately \$151, \$175, and \$134 more per year on their household electricity bills respectively as a result of the currently inflated wholesale gas price.
- By 2019, we estimate that using ACCC advised figures of where the wholesale gas price should have been in 2017, and with the Government's current policy-settings, households in New South Wales, Queensland, and Victoria will be paying substantially more for electricity:
 - The average household in New South Wales would pay \$434 more.
 - The average household in Queensland would pay \$312 more.
 - The average household in Victoria would pay \$254 more.
- Under a worse-case scenario – where current offers of \$19/GJ became the wholesale average – we forecast average residential prices to be far greater than what they should be; New South Wales at \$660 more, Queensland at \$579 more, and Victoria at \$443 more.

Part 1: The Role of Gas in Shaping Australia's Power Bills

Australia's energy prices are rising

Since 2007, Australians have seen their power bills rise consistently. According to the Australian Competition and Consumer Commission (ACCC), household power prices have risen in real terms by up to 80 to 90 per cent in the previous decade^{iv}. During that period, there have been numerous drivers of increased household energy prices, including the imposition of carbon pricing (though compensation mitigated these additional costs for some consumers), as well as the impact of 'gold plating' – the tendency of private power companies to 'pass through the cost of investing in poles and wires to consumers', which is thought to encourage at times unwarranted, costly private investment^v. The ACCC estimates that 48 per cent of the increase in household electricity prices have come as a direct result of gold plating network costs. In addition to these existing challenges, the escalating price in wholesale gas has also impacted household prices, and is perhaps the key driver of retail prices today.

"[Rising gas costs] are the single biggest factor in the current rise in electricity prices"
- Prime Minister, Malcolm Turnbull^{vi}.

Australia, and the world, is amid a revolution in the way that energy is produced and consumed; even though traditional fossil fuel energy production will remain a key component of Australia's energy system in the foreseeable future, and the proliferation of renewable technologies is predicted to increase. This paradigm shift has implications for Australia's energy network – particularly as private investors in energy production increasingly resist calls to invest in outdated energy production, such as coal-fired power plants, opting for more sustainable, long-term investments instead.

Australia's supply challenges in recent years have been somewhat exacerbated by the scheduled closure of retiring coal-fired power plants. The closures of Northern Power Station, in South Australia, and the Hazelwood Power Station in Victoria did impact overall supply significantly, requiring jurisdictions to increase production in non-coal fired power. Accordingly, an increasingly important element of Australia's current energy mix is gas-fired power. It should be noted, however, that the upward trends in consumer prices were evident prior to the closure of the major coal-fired power plants, suggesting that although these closures did play a role, they are not the only driving factor behind an increase in power prices.

"On any measure, it is clear that electricity prices in Australia have gone from a source of competitive advantage to a drain on business productivity and a serious affordability concern for households." – ACCC 2017^{vii}.

Gas is seen as key in transitioning to a low emissions economy

Gas is a vital fuel in facilitating the transition to a low emissions energy network in Australia. Currently, gas, as well as coal, are the two leading resources that facilitate the production of dispatchable energy – which is energy that can be created at short notice to meet immediate demand. But while coal currently plays an important role in energy production, this role is waning as the economics of long-term private investment in coal production becomes less appealing for investors. The growing global consensus on climate change action suggests to investors that jurisdictions will increasingly pursue cleaner technologies than coal to meet long-term energy needs. During this transition, gas will play an increasingly important role. Though gas-fired power is still a pollutant, its impact on the environment is markedly less than coal-fired power, and its ability to be dispatched at short notice means that, until renewable technologies have developed an enhanced ability to be dispatched on demand, gas will play a central role in meeting energy demand, as well as helping drive down emissions.

Gas prices have been rising and are volatile

Gas prices in Australia have risen markedly over the past few years. Ironically, the increase in wholesale gas prices has coincided with major developments in Australia's gas production capacity. By 2018, it is expected that Australia will overtake Qatar as the world's largest LNG exporter. However, despite the boom in gas production, shortfalls in domestic supply have occurred over 2017 and been predicted to continue into 2018. In large part, today's predicted shortfalls are the result of yesterday's poor policy. State and federal governments of both political persuasions have enabled major gas producers to develop Australia's natural gas fields without properly ensuring their committed export contracts would not drain supply out of the domestic market. As a result, most of the gas producers have entered into long-term contracts with foreign buyers which has consisted of a majority of their total production output. Additionally, some gas producers, such as Santos, have contracted to sell more gas than they extract from certain projects. The result in the Australian market has been one of price-uncertainty. As the ACCC's September 2017 Gas Market interim inquiry noted, gas prices in Australia have been consistently well above benchmark prices throughout 2017, and have often dramatically exceed international benchmark prices^{viii}. Because of policy uncertainty, there is also uncertainty regarding future prices. Therefore, major Australian gas consumers, including those who use gas to produce electricity, are being offered expensive gas contracts.

An inability to secure long-term gas contracts has impacted power prices

One of the challenges brought about by the unpredictability of future gas prices is the inability for Australian gas consumers, including electricity generators, to negotiate affordable long-term supply contracts with gas producers. This demonstrates the role that policy uncertainty has on inflating prices.

In South Australia, one of Engie's two units at the Pelican Point power station in South Australia was mothballed in 2015 due to the unwillingness of suppliers to enter into long term gas contracts. Following intervention from the South Australian government, Engie has entered into gas supply deals with Origin from July 2017 to 2020, Shell for winter 2017 and Santos for 15 PJ, starting in January 2018.

- ACCC^{ix}.

With coal being phased out by most generation businesses, dispatchable generation capacity will increasingly be reliant on gas powered plants. However, there is little, if any, committed private investment in gas powered generation, which likely reflects the current difficult supply environment and high gas prices.

- ACCC^x.

There is a significant correlation between wholesale gas prices and household power prices

This report identifies the trend in household power prices across federal electorates through an analysis of overall household consumption of electricity, noting that the extreme fluctuations in wholesale gas prices have direct correlation with the retail price of household electricity. The Australian Energy Regulator, in its May 2017 market update, noted that:

“Rising demand and a contraction in supply contributed to tight market conditions, with gas powered generation often setting dispatch prices. And gas generators responded to higher gas fuel costs by bidding into the market at higher price levels, repeatedly spiking wholesale prices in mainland NEM regions during winter 2016 and over summer 2016–17. In 2015–16, thirty-minute settlement prices exceeded \$200 per megawatt hour (MWh) almost 4000 times—an unprecedented number. Another 2100 instances occurred in the first nine months of 2016–17.”^{xi}

The ACCC notes that the impact of wholesale gas prices on consumer energy prices, is larger than the amount of gas that contributes to the total generation of electricity. This is because gas power generators are often the marginal supplier – ‘the last generator to add supply into a dispatch period’ – and therefore set the prices^{xii}.

Accordingly, energy prices in the National Energy Market, which covers the jurisdictions that are the subjects of this study, are significantly exposed to fluctuations in wholesale gas prices.

Ian Verrender, an Economics commentator, succinctly described the reason why gas plays such an important role in shaping consumer electricity prices:

“Unlike coal plants that take weeks to fire up or shut down, gas turbines can be turned on and off at short notice, making them ideal to fill the breach when renewables are offline. As the last player to enter the market, during power shortages, gas becomes the overall price setter.”— Ian Verrender, ABC^{xiii}.

The Australian Energy Regulator also determined that a key way to avert a looming electricity generation shortfall included ‘return to service of mothballed gas powered generators’, and that ‘forecasts highlight a growing interdependence between electricity and gas markets in eastern Australia’. Though, as described above, the ACCC argues that the owners of, or investors in, certain gas power generators have been unwilling or unable to enter long-term supply contracts.

Clearly, as Australia transitions towards an energy network consisting of less coal-fired electricity generation, the already important role of gas will only become more integral, as it is essential in providing dispatch stability to a grid relying more on renewable energy sources. Not only is gas a central component of Australia’s current and future electricity generation mix, it is also becoming more economically viable than coal-fire power generation, which has declined as a percentage of Australia’s total energy production in Australia in recent years. While some proponents of coal nostalgically lament the ongoing decline of coal-fired power in Australia, the reality is that the private sector actors involved in generating Australia’s electricity have broadly determined that investment in new (and often existing) coal-fired power plants is simply uneconomical. Alternative proposals to build ‘clean coal’ power stations have largely been deemed too expensive for investors to pursue^{xiv}.

The closure of major coal-fired power stations, such as the Northern Power Station in South Australia and the Hazelwood Power Station in Victoria were largely because of the untenable economic position operators of those stations experienced. Private sector actors, in both cases, deemed it a poor financial decision to continue the operation of dated power plants, instead opting to reorient investments towards other forms of generation. While proposals for additional ‘clean coal’ power generation have been tabled by members of the government, these too face economic hurdles that have discouraged investors to pursue such options. One result from this gradual shift away from coal-fired power generation and investment in coal is that gas-fired electricity generation is predicted to increase as a percentage of Australia’s total electricity generation, alongside renewable generation.

In this scenario, the whole sale price of Australian gas has a direct impact on the retail cost of household electricity for Australian consumers. It is, therefore, incumbent upon the Australian government to ensure that a domestic supply of gas is guaranteed to meet increasing national electricity demand to provide long-term certainty for producers and consumers.

A majority of Australian gas is exported

Australia is currently the world's second largest producer of liquefied natural gas (LNG), the primary gas product that is used for electricity generation as well as household and business gas consumption. By 2018, however, Australia is predicted to be the world's largest producer of LNG. Ironically, despite this windfall in LNG production, shortfalls in domestic gas supply have been seen, and are predicted in future peak-demand periods. Experts have determined that driving this domestic shortfall has been the tendency for Australia's LNG producers to export up to 70 per cent of East Coast LNG, leaving only around 30 per cent of Australia's generous LNG reserves available for domestic consumption^{xv}. Australian observers rightfully view this scenario as detrimental to the public interest. It has created uncertainty for businesses and households as even LNG producers have found it challenging to accurately predict price trends looking forward. To cover their bases, LNG suppliers have been negotiating 'take it or leave it' deals with large consumers of gas, according to the Australian Energy Regulator. This uncertainty is untenable for the Australian economy, and the government must adopt a more proactive zeal in its determination to overcome this enduring and avoidable energy crisis. While there have been some reforms announced throughout 2017, so far, prices continue to increase while consumer certainty remains illusive.

June reforms to federal gas policy have not translated into price contractions

Cognizant of the growing concern of everyday Australians regarding rising gas price, forecast shortages, and rapidly rising electricity prices, the Federal Government announced in June a series of reforms that aimed to alleviate the impact supply issues. On 20 June, the Commonwealth government announced the implementation of the Australian Domestic Gas Security Mechanism (ADGSM)^{xvi}. But while the ADGSM was intended to provide a mechanism that would ensure there is no shortfall in the domestic gas supply, there is significant concern that the policy does not go far enough to ensure supply over the long term, or put downward pressure on prices. As of the time of writing, the ADGSM 'trigger' has not been pulled by the government. Instead, an 'agreement' between the government and major gas suppliers was struck in October 2017^{xix}, with the government claiming this will guarantee supply in the interim. Problematically, these proposed solutions to the gas crisis are only short-term fixes. By design, the ADGSM and the 'agreement' are only temporary solutions to a problem that may continue well into the future. Notably, the reforms announced throughout the later half of 2017 have not led to major contractions in gas prices. This reflects the nature of the

ADGSM, which is a control on the potential volume of exports of gas, not a control on their prices within Australia. There are also legitimate concerns that the the ADGSM is not nimble enough to meet immediate shortfalls, with the Minister responsible for making the 'declaration' of a predicted shortfall for the upcoming year having to rely on long-range supply level estimates^{xx}. While the introduction of the ADGSM is one step towards guaranteeing more certainty in the Australian domestic gas market, it is likely insufficient in providing long-term certainty, and is certainly not a panacea for escalating wholesale gas prices on the East coast.

Government energy policy is reactive, not proactive

Throughout 2017, Australia's energy challenges have meant that power prices have dominated the political debate. The government, challenged by internal divergences in policy priorities, have thus far inadequately addressed the diversity of challenges Australia's energy sector faces. As a result, despite the piecemeal attempts at intervention by the Commonwealth, uncertainty remains – particularly over long-term gas supply and its impact on power prices.

In September 2017, the Commonwealth government solicited two agreements from the energy retailers that it argues will help alleviate cost pressures for every day consumers. The first was an agreement by all major retailers to inform their customers of alternate energy packages that may reduce overall costs for consumers. The government received a commitment from retailers that a letter would be distributed to all customers that outlined potential alternative plans that the retailers provided. This was intended to better inform consumers of potential savings that they could independently reach. Clearly, this intervention was insignificant and not intended to lower wholesale prices – and therefore retail prices – of gas and energy more broadly.

In the wake of a subsequent meeting by the prime minister, energy minister and CEOs of the major gas producers, an agreement was reached that the producers would guarantee the predicted level of gas demand within Australia would be met by local producers. While this guarantee is welcome, it is only a two-year commitment. Considering one of the drivers of higher energy prices – particularly for businesses with significant levels of consumption – is a lack of certainty over supply and prices in the long-term, this deal reached between the government and producers is insufficient. This piecemeal, reactionary approach to gas and energy policy making has done little to alleviate the concerns of businesses and consumers throughout Australia, but particularly on the eastern seaboard where the bulk of Australia's LNG is produced and consumed. The lack of transparency surrounding this deal also limits the certainty it can provide to those who are privy to the nature of the agreement.

The Regulatory Impact Statement found significant problems with federal gas policy

The Department of Industry, Innovation and Science released the Regulation Impact Statement (RIS) on the Australian Domestic Gas Security Mechanism (ADGSM) in November 2017, a week after the government's authority to use the ADGSM for the next 12 months was relinquished^{xxi}. The RIS explored the impact rising wholesale gas prices will have on the industrial and residential sector under four policy settings:

1. The status quo – no action is taken.
2. The Government signed a non-binding voluntary agreement with LNG Producers to increase gas supply in the next year.
3. A blanket gas reservation policy.
4. The existence and use of the Australian Domestic Gas Security Mechanism (ADGSM).

The statement reveals that the cost of doing nothing could risk the loss of at least 65,000 jobs, and at minimum cost the economy \$14 billion in direct manufacturing output (not including economy-wide net losses). It concludes that not changing policy settings would be an unacceptable position.

The department remained unconvinced of an industry-led agreement to guarantee adequate supply in the wholesale gas market – as has been signed by Prime Minister Malcolm Turnbull in September – will have a material effect on wholesale gas prices for the industrial sector. In particular it noted that the agreement focused on providing more supply to gas-powered electricity generators (and in turn, the NEM). It also outlined that the government would not be in a position to intervene if exporters did not provide enough gas, and that it would result in job losses and loss of economic output.

Whilst a blanket gas reservation policy would provide the most security to the domestic energy market, it concluded that it would have substantial short to medium term net benefits for the economy, but come at a high cost to all LNG exporters. Of primary concern was that a blanket policy would discriminate against those LNG Producers not liable for the domestic shortfall.

Lastly, it concluded that the ADGSM was the best policy setting to provide security to the market, citing reasons for its ability to focus on LNG Producers liable for the domestic shortfall, and to only apply to years when a domestic shortfall is expected to occur.

The government has signed an industry-led supply agreement, and has not activated the ADGSM within enough time to ensure security for Australia's energy sector in 2018. The country's current policy setting matches the option which the department of industry advised would be the least effective out of all actions taken.

The National Energy Guarantee won't affect prices until after 2020

On October 16 2017, the Commonwealth government announced a major initiative into energy policy, the National Energy Guarantee (NEG). The NEG is in substitute of a Clean Energy Target, which was recommended by Chief Scientist Alan Finkel in a major review of Australia's energy policy. Few details have been announced by the government at the time of writing, however, the key aims of the NEG are to require energy producers to meet two guarantees. The first requirement is a reliability guarantee: the NEG will determine that power providers maintain a certain level of dispatchable power in the energy mix. The NEG also mandates that energy providers hold a certain amount of renewables in their portfolios. This will be mandated to ensure Australia meets its international climate obligations.

While there is minimal detail to date on the specifics of the NEG, what is clear is that it does little to provide certainty in the immediate future – particularly surrounding gas prices. The NEG is expected to come into force by 2020, but is yet to be legislated. In the interim, the government's recent interventions and agreements with gas providers, which many argue are insufficient, are the only policy interventions in the energy market. At the time of writing, these interventions have done little to lower household power prices, nor secure certainty for large-scale consumers of gas.

Part 2: Household Power Prices – 2017-2019

The following analysis explores trends in household energy consumption and prices since 2010, with a forecast under various scenarios to 2019 under current policy. The analysis determines that, under existing policy settings, power prices will likely continue to rise, both in real terms and as a percentage of household income. By collating this data geographically, we can determine that certain jurisdictions are disproportionately impacted by this continued rise in household power prices. While many communities, particularly those with higher median incomes, have demonstrated a commitment to reduce household energy consumption over the past decades, jurisdictions with lower median incomes have tended to maintain a steady rate of energy consumption. The determinants of this discrepancy are beyond the scope of this report, though it stands to reason that households with lower incomes are less able to invest in efficient appliances, smart-meters, and other more contemporary technology that reduces the rate of consumption in the household. Higher income households, however, are better situated to invest in highly energy-efficient appliances that can reduce their overall energy consumption.

[This report explores the trend in household power prices under current and alternative policy](#)

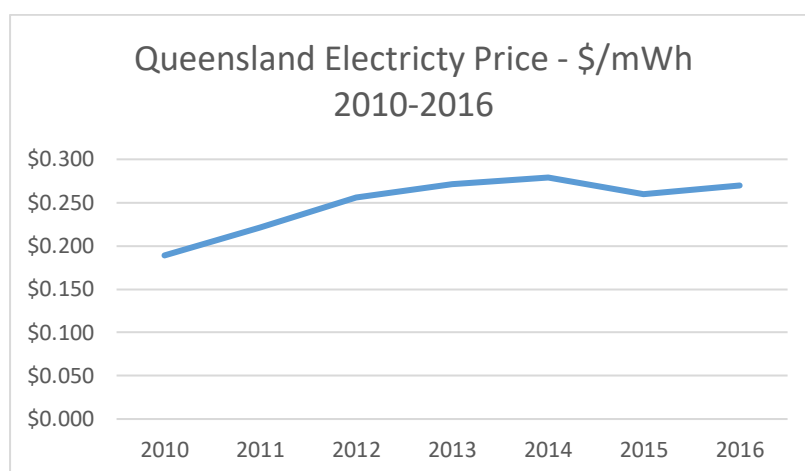
This report identifies trend median household power prices across electorates in the eastern mainland states of Australia. The states of Queensland, New South Wales and Victoria (and to a lesser extent, the ACT, Tasmania and South Australia) share an interconnected energy grid that is controlled by the Australian Energy Market Operator (AEMO). For the purpose of this study, we have focused specifically on these east coast states, excluding the ACT due to data limitations. The other Australian jurisdictions of Tasmania, South Australia, Northern Territory and Western Australia are all being challenged by rising energy prices. However, the scope of this study remains focused on the fluctuation and unpredictability of the east coast gas market, and how this uncertainty is likely to influence household power prices within the east coast energy market.

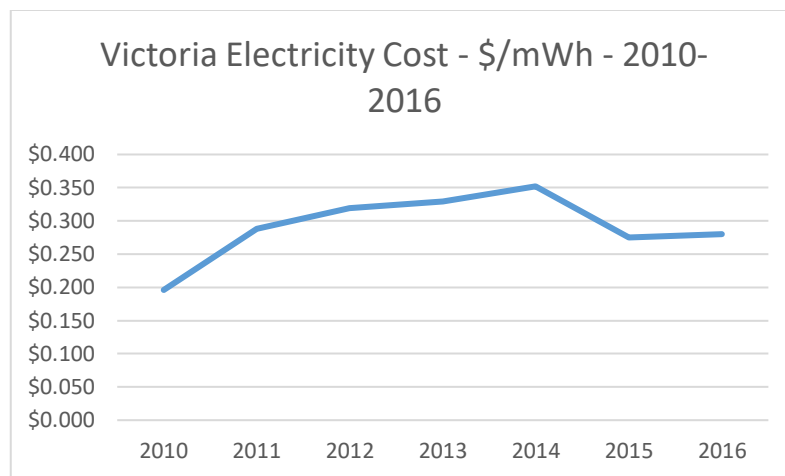
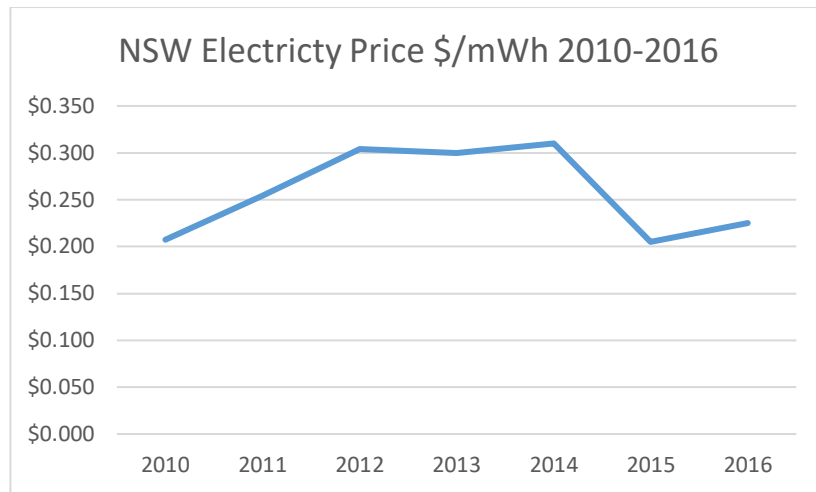
[Determining the geographical impact of rising power prices](#)

Australia's energy prices vary between jurisdictions. But within each city, and each state's regional areas, prices are generally harmonised. For example, in New South Wales, there is a Sydney-wide price and other prices outside the capital. This report has identified median electricity consumption in each electorate, and applied historic, current and forecast retail electricity prices in the relevant jurisdictions to determine the median household costs of energy prices in each east coast electorate.

Determining Median Prices & Consumption – 2010 to 2016.

The analysis begins by determining the median household energy consumption in the years of 2010 to 2016. In 2014, the Australian Bureau of Statistics released a unique survey, which collated the low, median and high household electricity consumption across Australia. The Australian Household Energy Consumption Survey is the only study that determines to an SA2 level (the most localised geographic entity that the ABS collects) household electricity consumption. The survey ran from 2010 to 2012. While granular data on household consumption is not publically available beyond this survey, this report has used broader consumption trends to determine the changes in household consumption since 2012. The median consumption levels allow us to determine the 'representative consumer' in each electorate. While there will be cases in each electorate that are significantly higher or lower depending on the consumption levels of an individual household, this reports findings are based upon median consumption.





Forecasting Household Consumption – 2015-2019

This report notes there is limited data available for household energy consumption from the years 2015 to 2017, and into the future. Accordingly, the median data from the ABS' comprehensive Household Electricity Consumption Survey, released in 2014, have been used as a base to predict today's consumption. Using the data collected between 2010-2012, this report then applies state-wide energy consumption data to determine a reasonable estimate of household consumption into the present. This same methodology has been adopted to estimate future household consumption trends by electorate.

Modeling the Influence of Gas Prices on Household Energy Bills

The costs identified in Appendices A, B, C and D follow the impact of four differing wholesale gas prices, and two less likely scenarios to explore the impact wholesale gas prices have on East Coast household's power bills:

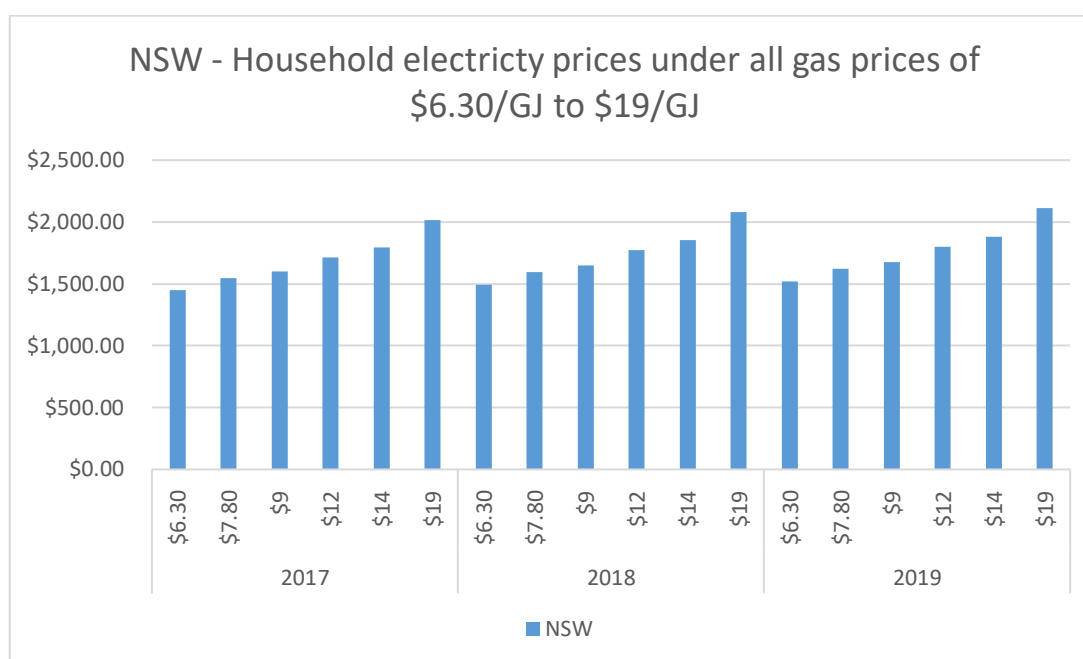
- Likely or achievable scenarios:
 - Household power prices 2017-2019 under ACCC's desired wholesale gas price:
 - Scenario One: Household power prices 2017-2019 with gas at \$6.30/GJ.
 - Scenario Two: Household power prices 2017-2019 with gas at \$7.70/GJ.
 - **Scenario Three: Household power prices 2017-2019 under current approximate wholesale gas price of \$9/GJ.**
 - Scenario Four: Household power prices 2017-2019 with gas at \$12/GJ.
 - Scenario Five: Household power prices 2017-2019 with gas at \$14/GJ.
- Less likely scenario:
 - Scenario Six: Household power prices 2017-2019 with gas at \$19/GJ.

While \$19/GJ prices are only hypothetical estimates based for the purpose of this study, they reflect prices that have already been seen in Australia's wholesale gas market. Often, long-term contracts have been offered at prices resembling these higher prices. The Finkel Review noted that supply contracts have ranged from as low as \$6/GJ to \$22/GJ^{xxiii}. It is, however, improbable that wholesale gas prices would rise to such extremes under current forecasts. There is no certainty that the higher range of these prices are likely to be sustained, but scenarios Two and Three demonstrate that there is a clear case for implementing policy to arrest the growth and instability in gas prices to ensure Australia's gas prices do not rise significantly.

Part 3: Findings

Average Annual Household Energy Prices Under Various Wholesale Gas Prices – 2017-2019

New South Wales

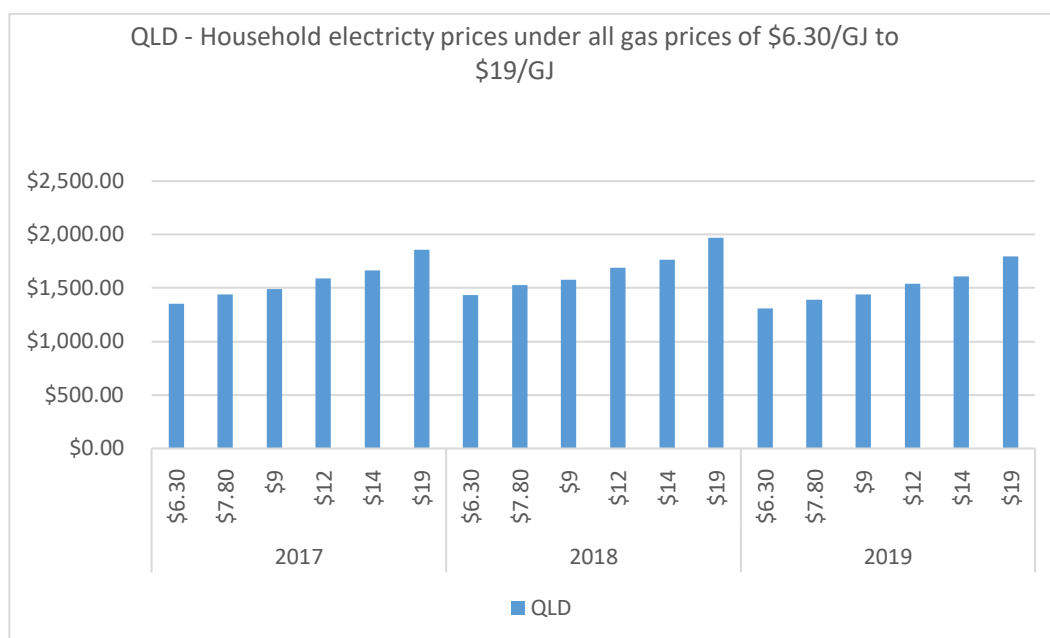


New South Wales - Averages

	\$6.30	\$7.80	\$9	\$12	\$14	\$19
2017	\$1,448.32	\$1,546.86	\$1,599.65	\$1,715.78	\$1,796.72	\$2,018.08
2018	\$1,494.96	\$1,596.67	\$1,651.16	\$1,771.04	\$1,854.59	\$2,083.07
2019	\$1,517.39	\$1,620.62	\$1,675.93	\$1,797.60	\$1,882.40	\$2,114.32

- By 2019, average households in New South Wales would save approximately \$159 on their annual power bill with wholesale gas prices at \$6.30/GJ compared to current prices of \$9/GJ.
- By 2019, average households in New South Wales would save approximately \$55 on their annual power bill with wholesale gas prices at \$7.80/GJ compared to current prices of \$9/GJ.
- By 2019, average households in New South Wales would pay approximately \$207 more on their annual power bill than what they should be paying at \$9/GJ if wholesale gas prices rise to \$14/GJ.

Queensland

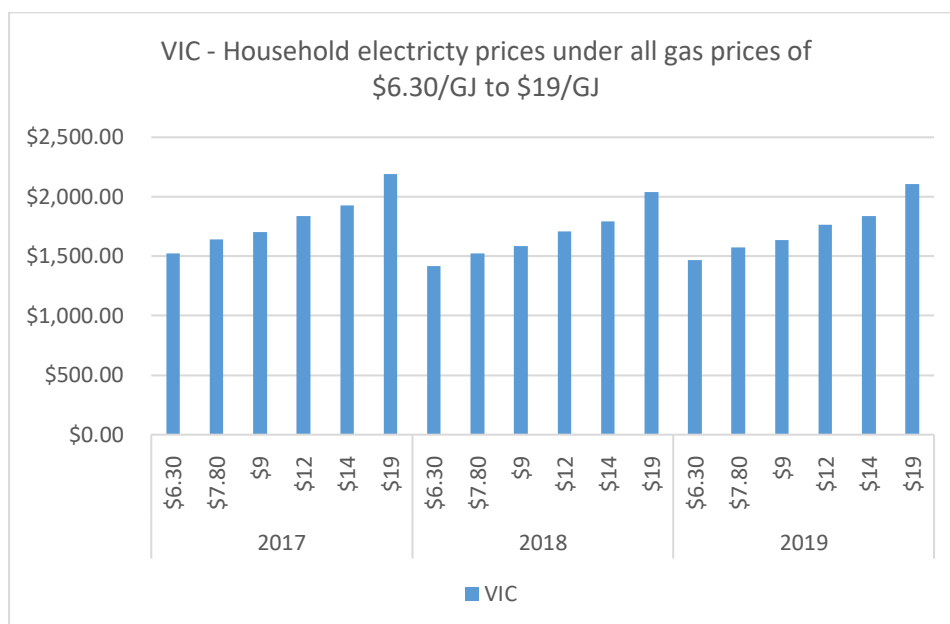


Queensland - Averages

	\$6.30	\$7.80	\$9	\$12	\$14	\$19
2017	\$1,525.63	\$1,639.95	\$1,701.19	\$1,835.93	\$1,929.83	\$2,189.20
2018	\$1,419.47	\$1,525.84	\$1,582.82	\$1,708.18	\$1,795.55	\$2,036.87
2019	\$1,466.96	\$1,576.88	\$1,635.77	\$1,765.32	\$1,838.55	\$2,105.01

- By 2019, average households in Queensland would save approximately \$169 on their annual power bill with wholesale gas prices at \$6.30/GJ compared to current prices of \$9/GJ.
- By 2019, average households in Queensland would save approximately \$59 on their annual power bill with wholesale gas prices at \$7.80/GJ compared to current prices of \$9/GJ.
- By 2019, average households in Queensland would pay approximately \$203 more on their annual power bill than what they should be paying at \$9/GJ if wholesale gas prices rise to \$14/GJ.

Victoria



Victoria - Averages

	\$6.30	\$7.80	\$9	\$12	\$14	\$19
2017	\$1,353.13	\$1,440.59	\$1,487.45	\$1,590.53	\$1,662.37	\$1,857.86
2018	\$1,436.82	\$1,529.69	\$1,579.44	\$1,688.89	\$1,765.18	\$1,972.77
2019	\$1,308.24	\$1,392.80	\$1,438.10	\$1,537.76	\$1,607.22	\$1,796.23

- By 2019, average households in Victoria would save approximately \$130 on their annual power bill with wholesale gas prices at \$6.30/GJ compared to current prices of \$9/GJ.
- By 2019, average households in Victoria would save approximately \$45 on their annual power bill with wholesale gas prices at \$7.80/GJ compared to current prices of \$9/GJ.
- By 2019, average households in Victoria would pay approximately \$169 more on their annual power bill than what they should be paying at \$9/GJ if wholesale gas prices rise to \$14/GJ.

Real Electorate Examples

The following three examples of electorates with high median energy consumption demonstrate the scale of savings that can be attained with a reduction in wholesale gas prices.

Example One: The Electorate of Mitchell, New South Wales.

MITCHELL, NSW

	\$6.30	\$7.80	\$9	\$12	\$14	\$19
2017	\$2,091.95	\$2,234.27	\$2,310.52	\$2,478.27	\$2,595.18	\$2,914.90
2018	\$2,159.31	\$2,306.23	\$2,384.93	\$2,558.07	\$2,678.75	\$3,008.77
2019	\$2,191.70	\$2,340.82	\$2,420.70	\$2,596.45	\$2,718.93	\$3,053.91

- By 2019, average households in Mitchell would save approximately \$229 on their annual power bill with wholesale gas prices at \$6.30/GJ compared to current prices.
- By 2019, average households in Mitchell would save approximately \$80 on their annual power bill with wholesale gas prices at \$7.80/GJ compared to current prices.
- By 2019, average households in Mitchell would pay approximately \$298 more on their annual power bill than what they should be paying if wholesale gas prices rise to \$14/GJ.

Example Two: The Electorate of Forde, Queensland.

FORDE, Queensland.

	\$6.30	\$7.80	\$9	\$12	\$14	\$19
2017	\$1,800.99	\$1,935.94	\$2,008.24	\$2,167.29	\$2,278.15	\$2,584.33
2018	\$1,675.67	\$1,801.24	\$1,868.50	\$2,016.49	\$2,119.63	\$2,404.51
2019	\$1,731.73	\$1,861.49	\$1,931.01	\$2,083.95	\$2,190.54	\$2,484.95

- By 2019, average households in Forde would save approximately \$199 on their annual power bill with wholesale gas prices at \$6.30/GJ compared to current prices.
- By 2019, average households in Forde would save approximately \$70 on their annual power bill with wholesale gas prices at \$7.80/GJ compared to current prices.
- By 2019, average households in Forde would pay approximately \$260 more on their annual power bill than what they should be paying if wholesale gas prices rise to \$14/GJ.

Example Three: The Electorate of Indi, Victoria.

<i>INDI, Victoria.</i>						
	\$6.30	\$7.80	\$9	\$12	\$14	\$19
2017	\$1,813.08	\$1,930.27	\$1,993.05	\$2,131.17	\$2,227.43	\$2,489.38
2018	\$1,925.21	\$2,049.65	\$2,116.31	\$2,262.97	\$2,365.19	\$2,643.34
2019	\$1,752.93	\$1,866.24	\$1,926.93	\$2,060.47	\$2,153.54	\$2,406.80

- By 2019, average households in Indi would save approximately \$174 on their annual power bill with wholesale gas prices at \$6.30/GJ compared to current prices.
- By 2019, average households in Indi would save approximately \$61 on their annual power bill with wholesale gas prices at \$7.80/GJ compared to current prices.
- By 2019, average households in Indi would pay approximately \$227 more on their annual power bill than what they should be paying if wholesale gas prices rise to \$14/GJ.

How much more are people already paying?

	<i>2017</i>			
	\$6.30/GJ ¹	\$7.80/GJ	\$9/GJ- Current Price	Average household cost for current high gas prices in 2017
NSW	1448.32	1546.86	\$1,599.65	\$151.33
QLD	1525.63	1639.95	\$1,701.19	\$175.56
VIC	1353.13	1440.59	\$1,487.45	\$134.32

This report uses the wholesale gas price of \$9/GJ as an approximation of current average gas prices at the time of writing. However, as has been established in this report, the current price is significantly inflated. In essence, Australian consumers are already burdened by inflated wholesale gas prices, and this has been represented in recent power bills. This report estimates that the currently inflated wholesale gas price in 2017 has cost consumers in New South Wales, Queensland and Victoria \$151.33, \$175.56 and \$134.32 respectively.

¹ The ACCC has argued that Australia's current wholesale gas price of approximately \$9/GJ is inflated, and that a price of \$6.30/GJ would be a reasonable price in Australia's market.

What is the cost if prices continue to rise?

Scenario 1: Current 2017 wholesale gas prices rising to \$14/GJ by 2019.

Scenario 1					
	\$9/GJ 2017	\$12/GJ 2018	\$14/GJ 2019	Annual price increase by 2019	Aggregate additional costs over the two year period
<i>NSW</i>	\$1,599.65	\$1,771.04	\$1,882.40	\$282.75	\$454.14
<i>Queensland</i>	\$1,701.19	\$1,708.18	\$1,838.55	\$137.36	\$144.35
<i>Victoria</i>	\$1,487.45	\$1,688.89	\$1,607.22	\$119.77	\$321.21

Scenario one demonstrates the extent to which household power prices are exposed to significant price fluctuations in wholesale gas. Were prices to continue to rise from the already exaggerated price of \$9/GJ to a price in the range of \$14/GJ, households would be faced with a significant annual power price hike. In New South Wales, this would be around \$282, around \$137 in Queensland, and \$120 in Victoria. Were these prices to eventuate, households in New South Wales, Queensland and Victoria would be facing total extra power costs of \$454, \$144 and \$321 respectively over the years 2018-2019.

What would households save if prices were lowered?

Scenario 2: Wholesale gas prices reducing from current 2017 price to \$6.30/GJ by 2019

	\$9/GJ 2017	\$7.80/GJ 2018	\$6.30/GJ 2019	Annual price decrease by 2019.	Total savings achieved over two year period
<i>NSW</i>	\$1,599.65	\$1,596.67	\$1,517.39	\$(82.26)	\$(85.24)
<i>Queensland</i>	\$1,701.19	\$1,525.84	\$1,466.96	\$(234.23)	\$(409.58)
<i>Victoria</i>	\$1,487.45	\$1,529.69	\$1,308.24	\$(179.21)	\$(136.97)

Conversely, if government policy leads to a reduction in wholesale gas prices towards levels deemed achievable by the ACCC, households in each state will save significantly on annual power bills. If the wholesale gas price is lowered to \$6.30/GJ, households in New South Wales, Queensland and Victoria could expect to save a total of \$85, \$409 and \$136 respectively over the two years of 2018-2019.

Two paths: what households could pay by 2019 under best and worst case scenarios

	2017	2018		2019				Two year price difference
	\$9/GJ	\$6.30/GJ	\$14/GJ		\$6.30/GJ	\$14/GJ		
				Difference			Difference	
NSW	\$1,599.65	\$1,448.32	\$1,596.67	\$148.35	\$1,517.39	\$1,882.40	\$365.01	\$513.36
QLD	\$1,701.19	\$1,525.63	\$1,525.84	\$0.21	\$1,466.96	\$1,838.55	\$371.59	\$371.80
VIC	\$1,487.45	\$1,353.13	\$1,529.69	\$176.56	\$1,308.24	\$1,607.22	\$298.98	\$475.54

If policy does not achieve a reduction in the price of wholesale gas price, consumers could be faced with a significant price burden compared to a scenario in which prices are returned to acceptable levels. By 2019, the difference in annual power prices with gas at \$6.30/GJ compared with a higher estimated of \$14/GJ could reach \$365 in New South Wales, \$371 in Queensland, and \$299 in Victoria. If this price gap persisted over the two-year period spanning 2018-2019, the aggregate additional costs for households could reach \$513 in New South Wales, \$371.80 in Queensland and \$475 in Victoria. These figures demonstrate the significance that fluctuations in the wholesale gas price can have on household power prices, and demonstrate the importance in identifying government policy that will help arrest the growth in wholesale gas prices, and return these prices to acceptable levels.

Conclusion

This report has demonstrated the key role that wholesale gas prices play in shaping household power prices. As governments in Australia grapple with the challenges associated with a changing energy market and rising prices, it is vital that the central role gas plays in shaping prices is not lost in an increasingly complex debate. Gas-power electricity, as this report has noted, currently plays a central role in setting gas prices in Australia.

It is clear to many that wholesale gas prices are simply too high: currently, wholesale gas prices hover around \$9/GJ – significantly more than in neighbouring Asian markets. Without significant government action, there is no guarantee that prices could fall to rates the ACCC have suggested are achievable is unlikely. This report, however, has identified the costs that consumers in New South Wales, Queensland and Victoria will pay if these realistic and desired rates are not achieved.

By 2019, consumers in New South Wales, Queensland and Victoria will be paying around \$158, 168 and \$129 more on their annual power bills under the currently inflated wholesale gas price than if these prices were brought under control. Were gas prices to rise even further, to a realistic \$14/GJ, consumers in these states would, on average, pay \$365, \$372, and \$299 more annually on their power bills than what they should be paying.

Appendix A: Household Electricity Prices by Electorate, 2017-2019 Under Rising Gas Prices

New South Wales

	ACCC advised	2018	2019
<i>Gas Price Scenarios</i>	\$6.3/GJ	\$12/GJ	\$14/GJ
<i>Electricity price</i>	0.2403837	0.289602	0.303264
Banks	\$1,414.41	\$1,729.57	\$1,838.33
Barton	\$1,196.26	\$1,462.81	\$1,554.80
Bennelong	\$1,328.42	\$1,624.41	\$1,726.56
Berowra	\$2,100.05	\$2,567.99	\$2,729.47
Blaxland	\$1,344.08	\$1,643.56	\$1,746.92
Bradfield	\$1,922.98	\$2,351.45	\$2,499.32
Calare	\$1,375.81	\$1,682.37	\$1,788.16
Chifley	\$1,536.54	\$1,878.91	\$1,997.06
Cook	\$1,414.41	\$1,729.57	\$1,838.33
Cowper	\$1,172.91	\$1,434.26	\$1,524.45
Cunningham	\$1,341.88	\$1,640.88	\$1,744.06
Dobell	\$1,523.49	\$1,862.95	\$1,980.10
Eden-Monaro	\$1,282.67	\$1,568.48	\$1,667.11
Farrer	\$1,578.99	\$1,930.82	\$2,052.23
Fowler	\$1,686.69	\$2,062.52	\$2,192.22
Gilmore	\$1,101.20	\$1,346.57	\$1,431.24
Grayndler	\$1,089.66	\$1,332.46	\$1,416.24
Greenway	\$1,653.45	\$2,021.87	\$2,149.01
Hughes	\$1,824.34	\$2,230.84	\$2,371.12
Hume	\$1,845.77	\$2,257.05	\$2,398.97
Hunter	\$1,714.44	\$2,096.45	\$2,228.28
Kingsford-Smith	\$1,064.11	\$1,301.21	\$1,383.04
Lindsay	\$1,935.89	\$2,367.24	\$2,516.10
Lyne	\$1,239.12	\$1,515.22	\$1,610.51
Macarthur	\$1,667.87	\$2,039.51	\$2,167.75
Mackellar	\$1,610.58	\$1,969.46	\$2,093.30
Macquarie	\$1,661.00	\$2,031.11	\$2,158.83
McMahon	\$1,693.97	\$2,071.42	\$2,201.68

Mitchell	\$2,091.95	\$2,558.07	\$2,718.93
New England	\$1,419.91	\$1,736.29	\$1,845.48
Newcastle	\$1,237.47	\$1,513.21	\$1,608.36
North Sydney	\$1,099.00	\$1,343.88	\$1,428.39
Page	\$1,205.33	\$1,473.90	\$1,566.58
Parkes	\$1,572.67	\$1,923.09	\$2,044.02
Parramatta	\$1,246.54	\$1,524.30	\$1,620.15
Paterson	\$1,617.18	\$1,977.52	\$2,101.87
Reid	\$1,211.10	\$1,480.96	\$1,574.08
Richmond	\$1,171.81	\$1,432.91	\$1,523.02
Riverina	\$1,369.35	\$1,674.47	\$1,779.77
Robertson	\$1,571.84	\$1,922.08	\$2,042.95
Shortland	\$1,483.51	\$1,814.07	\$1,928.14
Sydney	\$885.52	\$1,082.83	\$1,150.92
Warringah	\$1,275.66	\$1,559.91	\$1,658.00
Watson	\$1,237.06	\$1,512.70	\$1,607.83
Wentworth	\$1,050.09	\$1,284.08	\$1,364.82
Werriwa	\$1,607.84	\$1,966.10	\$2,089.73
Whitlam	\$1,396.28	\$1,707.40	\$1,814.76

Queensland

	ACCC advised	2018	2019
<i>Gas Price</i>	\$6.30/GJ	\$12/GJ	\$14/GJ
<i>Electricity price</i>	0.2905632	0.3205224	0.34304256
Blair	\$1,469.38	\$1,645.19	\$1,787.20
Bonner	\$1,453.14	\$1,627.02	\$1,767.45
Bowman	\$1,682.62	\$1,883.95	\$2,046.57
Brisbane	\$1,037.73	\$1,161.90	\$1,262.19
Capricornia	\$1,606.35	\$1,798.56	\$1,953.80
Dawson	\$1,696.74	\$1,899.76	\$2,063.74
Dickson	\$1,804.03	\$2,019.88	\$2,194.23
Fadden	\$1,721.02	\$1,926.95	\$2,093.27
Fairfax	\$1,592.76	\$1,783.34	\$1,937.27
Fisher	\$1,521.63	\$1,703.70	\$1,850.75
Flynn	\$1,623.64	\$1,817.91	\$1,974.82
Forde	\$1,800.99	\$2,016.49	\$2,190.54
Griffith	\$1,214.82	\$1,360.18	\$1,477.59
Groom	\$1,353.38	\$1,515.32	\$1,646.11
Herbert	\$1,692.26	\$1,894.74	\$2,058.28
Hinkler	\$1,289.51	\$1,443.81	\$1,568.43
Kennedy	\$1,686.19	\$1,887.94	\$2,050.90
Leichardt	\$1,525.72	\$1,708.28	\$1,855.73
Lilley	\$1,223.01	\$1,369.34	\$1,487.54
Longman	\$1,562.01	\$1,748.91	\$1,899.87
Maranoa	\$1,431.90	\$1,603.23	\$1,741.61
Mcpherson	\$1,606.88	\$1,799.15	\$1,954.44
Moncrieff	\$1,628.26	\$1,823.08	\$1,980.44
Moreton	\$1,461.33	\$1,636.18	\$1,777.41
Oxley	\$1,553.96	\$1,739.90	\$1,890.08
Petrie	\$1,432.29	\$1,603.67	\$1,742.09
Rankin	\$1,658.47	\$1,856.92	\$2,017.20
Ryan	\$1,364.47	\$1,527.73	\$1,659.60
Wide Bay	\$1,326.73	\$1,485.47	\$1,613.69
Wright	\$1,747.68	\$1,956.80	\$1,613.69

Victoria

	ACCC advised	2018	2019
<i>Gas Price</i>	\$6.30/GJ	\$12/GJ	\$14/GJ
<i>Electricity Price</i>	0.3311308	0.40718944	0.38177216
Aston	\$1,393.92	\$1,739.80	\$1,655.67
Ballarat	\$1,410.03	\$1,759.91	\$1,674.80
Batman	\$1,006.32	\$1,256.02	\$1,195.28
Bendigo	\$1,446.52	\$1,805.46	\$1,718.15
Bruce	\$1,184.17	\$1,478.01	\$1,406.54
Calwell	\$1,187.46	\$1,482.11	\$1,410.44
Casey	\$1,447.50	\$1,806.69	\$1,719.32
Chisholm	\$1,267.02	\$1,581.41	\$1,504.94
Corangamite	\$1,404.44	\$1,752.93	\$1,668.17
Corio	\$1,173.32	\$1,464.47	\$1,393.65
Deakin	\$1,238.75	\$1,546.13	\$1,471.36
Dunkley	\$1,224.28	\$1,528.07	\$1,454.18
Flinders	\$1,398.68	\$1,745.75	\$1,661.33
Gellibrand	\$1,034.10	\$1,290.70	\$1,228.28
Gippsland	\$1,445.20	\$1,803.81	\$1,716.59
Goldstein	\$1,454.41	\$1,815.30	\$1,727.52
Gorton	\$1,303.02	\$1,626.35	\$1,547.70
Higgins	\$1,318.80	\$1,646.04	\$1,566.44
Holt	\$1,155.57	\$1,442.31	\$1,372.57
Hotham	\$1,309.76	\$1,634.76	\$1,555.70
Indi	\$1,813.08	\$2,262.97	\$2,153.54
Isaacs	\$1,314.69	\$1,640.91	\$1,561.56
Jagajaga	\$1,173.98	\$1,465.29	\$1,394.43
Kooyong	\$1,460.33	\$1,822.69	\$1,734.55
La Trobe	\$1,388.66	\$1,733.24	\$1,649.42
Lalor	\$1,290.36	\$1,610.55	\$1,532.67
Mallee	\$2,115.86	\$2,640.89	\$2,513.18
Maribyrnong	\$1,169.38	\$1,459.55	\$1,388.97
Mcewen	\$1,756.20	\$2,191.99	\$2,085.99

<i>Mcmillan</i>	\$1,374.03	\$1,714.98	\$1,632.05
<i>Melbourne</i>	\$1,103.96	\$1,377.89	\$1,311.26
<i>Melbourne Ports</i>	\$1,185.82	\$1,480.06	\$1,408.49
<i>Menzies</i>	\$1,417.26	\$1,768.94	\$1,683.39
<i>Murray</i>	\$1,745.36	\$2,178.45	\$2,073.10
<i>Scullin</i>	\$1,170.36	\$1,460.78	\$1,390.14
<i>Wannon</i>	\$1,753.90	\$2,189.11	\$2,083.25
<i>Wills</i>	\$1,029.33	\$1,284.75	\$1,222.62

Appendix B: 2017 Household Electricity Prices by Electorate Under Varying Gas Prices

New South Wales

<i>Electorate</i>	2017					
	\$6.30	\$7.80	\$9	\$12	\$14	\$19
<i>Banks</i>	\$1,414.41	\$1,510.64	\$1,562.20	\$1,675.61	\$1,754.66	\$1,970.83
<i>Barton</i>	\$1,196.26	\$1,277.65	\$1,321.25	\$1,417.17	\$1,484.03	\$1,666.86
<i>Bennelong</i>	\$1,328.42	\$1,418.80	\$1,467.21	\$1,573.73	\$1,647.98	\$1,851.01
<i>Berowra</i>	\$2,100.05	\$2,242.93	\$2,319.47	\$2,487.87	\$2,605.23	\$2,926.20
<i>Blaxland</i>	\$1,344.08	\$1,435.52	\$1,484.51	\$1,592.29	\$1,667.40	\$1,872.83
<i>Bradfield</i>	\$1,922.98	\$2,053.81	\$2,123.90	\$2,278.09	\$2,385.56	\$2,679.46
<i>Calare</i>	\$1,375.81	\$1,469.42	\$1,519.56	\$1,629.88	\$1,706.77	\$1,917.05
<i>Chifley</i>	\$1,536.54	\$1,641.08	\$1,697.08	\$1,820.29	\$1,906.16	\$2,141.00
<i>Cook</i>	\$1,414.41	\$1,510.64	\$1,562.20	\$1,675.61	\$1,754.66	\$1,970.83
<i>Cowper</i>	\$1,172.91	\$1,252.71	\$1,295.46	\$1,389.51	\$1,455.06	\$1,634.32
<i>Cunningham</i>	\$1,341.88	\$1,433.18	\$1,482.08	\$1,589.68	\$1,664.68	\$1,869.77
<i>Dobell</i>	\$1,523.49	\$1,627.14	\$1,682.67	\$1,804.83	\$1,889.97	\$2,122.82
<i>Eden-Monaro</i>	\$1,282.67	\$1,369.94	\$1,416.69	\$1,519.54	\$1,591.23	\$1,787.26
<i>Farrer</i>	\$1,578.99	\$1,686.42	\$1,743.97	\$1,870.58	\$1,958.82	\$2,200.15
<i>Fowler</i>	\$1,686.69	\$1,801.45	\$1,862.92	\$1,998.17	\$2,092.44	\$2,350.22
<i>Gilmore</i>	\$1,101.20	\$1,176.12	\$1,216.26	\$1,304.56	\$1,366.10	\$1,534.40
<i>Grayndler</i>	\$1,089.66	\$1,163.79	\$1,203.51	\$1,290.89	\$1,351.78	\$1,518.32
<i>Greenway</i>	\$1,653.45	\$1,765.94	\$1,826.20	\$1,958.79	\$2,051.19	\$2,303.90
<i>Hughes</i>	\$1,824.34	\$1,948.46	\$2,014.95	\$2,161.24	\$2,263.20	\$2,542.02
<i>Hume</i>	\$1,845.77	\$1,971.35	\$2,038.62	\$2,186.63	\$2,289.78	\$2,571.88
<i>Hunter</i>	\$1,714.44	\$1,831.08	\$1,893.57	\$2,031.05	\$2,126.86	\$2,388.89
<i>Kingsford-Smith</i>	\$1,064.11	\$1,136.50	\$1,175.29	\$1,260.62	\$1,320.08	\$1,482.72
<i>Lindsay</i>	\$1,935.89	\$2,067.60	\$2,138.16	\$2,293.39	\$2,401.58	\$2,697.45
<i>Lyne</i>	\$1,239.12	\$1,323.43	\$1,368.59	\$1,467.95	\$1,537.20	\$1,726.59
<i>Macarthur</i>	\$1,667.87	\$1,781.35	\$1,842.14	\$1,975.88	\$2,069.09	\$2,324.00
<i>Mackellar</i>	\$1,610.58	\$1,720.16	\$1,778.87	\$1,908.01	\$1,998.02	\$2,244.18
<i>Macquarie</i>	\$1,661.00	\$1,774.01	\$1,834.55	\$1,967.74	\$2,060.57	\$2,314.43
<i>McMahon</i>	\$1,693.97	\$1,809.22	\$1,870.96	\$2,006.80	\$2,101.47	\$2,360.37
<i>Mitchell</i>	\$2,091.95	\$2,234.27	\$2,310.52	\$2,478.27	\$2,595.18	\$2,914.90
<i>New England</i>	\$1,419.91	\$1,516.51	\$1,568.27	\$1,682.12	\$1,761.48	\$1,978.49
<i>Newcastle</i>	\$1,237.47	\$1,321.67	\$1,366.77	\$1,466.00	\$1,535.16	\$1,724.29
<i>North Sydney</i>	\$1,099.00	\$1,173.77	\$1,213.83	\$1,301.95	\$1,363.37	\$1,531.34
<i>Page</i>	\$1,205.33	\$1,287.33	\$1,331.27	\$1,427.92	\$1,495.28	\$1,679.50
<i>Parkes</i>	\$1,572.67	\$1,679.67	\$1,736.99	\$1,863.09	\$1,950.99	\$2,191.35

Parramatta	\$1,246.54	\$1,331.35	\$1,376.78	\$1,476.74	\$1,546.40	\$1,736.92
Paterson	\$1,617.18	\$1,727.21	\$1,786.15	\$1,915.82	\$2,006.20	\$2,253.37
Reid	\$1,211.10	\$1,293.50	\$1,337.64	\$1,434.75	\$1,502.44	\$1,687.54
Richmond	\$1,171.81	\$1,251.53	\$1,294.24	\$1,388.21	\$1,453.70	\$1,632.79
Riverina	\$1,369.35	\$1,462.52	\$1,512.43	\$1,622.23	\$1,698.76	\$1,908.05
Robertson	\$1,571.84	\$1,678.79	\$1,736.08	\$1,862.12	\$1,949.96	\$2,190.20
Shortland	\$1,483.51	\$1,584.45	\$1,638.52	\$1,757.47	\$1,840.38	\$2,067.12
Sydney	\$885.52	\$945.77	\$978.04	\$1,049.05	\$1,098.54	\$1,233.88
Warringah	\$1,275.66	\$1,362.46	\$1,408.95	\$1,511.24	\$1,582.53	\$1,777.50
Watson	\$1,237.06	\$1,321.23	\$1,366.32	\$1,465.51	\$1,534.65	\$1,723.71
Wentworth	\$1,050.09	\$1,121.54	\$1,159.81	\$1,244.02	\$1,302.70	\$1,463.19
Werriwa	\$1,607.84	\$1,717.23	\$1,775.83	\$1,904.76	\$1,994.61	\$2,240.35
Whitlam	\$1,396.28	\$1,491.28	\$1,542.17	\$1,654.13	\$1,732.16	\$1,945.57
AVERAGE	\$1,448.32	\$1,546.86	\$1,599.65	\$1,715.78	\$1,796.72	\$2,018.08

2017

	\$6.30	\$7.80	\$9	\$12	\$14	\$19
Blair	\$1,469.38	\$1,579.48	\$1,638.46	\$1,768.23	\$1,858.67	\$2,108.48
Bonner	\$1,453.14	\$1,562.03	\$1,620.37	\$1,748.70	\$1,838.14	\$2,085.19
Bowman	\$1,682.62	\$1,808.71	\$1,876.25	\$2,024.85	\$2,128.42	\$2,414.48
Brisbane	\$1,037.73	\$1,115.49	\$1,157.15	\$1,248.80	\$1,312.67	\$1,489.10
Capricornia	\$1,606.35	\$1,726.72	\$1,791.20	\$1,933.06	\$2,031.94	\$2,305.03
Dawson	\$1,696.74	\$1,823.88	\$1,892.00	\$2,041.84	\$2,146.28	\$2,434.74
Dickson	\$1,804.03	\$1,939.21	\$2,011.63	\$2,170.95	\$2,281.99	\$2,588.69
Fadden	\$1,721.02	\$1,849.98	\$1,919.07	\$2,071.06	\$2,176.99	\$2,469.58
Fairfax	\$1,592.76	\$1,712.11	\$1,776.05	\$1,916.71	\$2,014.75	\$2,285.53
Fisher	\$1,521.63	\$1,635.65	\$1,696.73	\$1,831.12	\$1,924.78	\$2,183.47
Flynn	\$1,623.64	\$1,745.30	\$1,810.48	\$1,953.87	\$2,053.81	\$2,329.84
Forde	\$1,800.99	\$1,935.94	\$2,008.24	\$2,167.29	\$2,278.15	\$2,584.33
Griffith	\$1,214.82	\$1,305.85	\$1,354.62	\$1,461.91	\$1,536.68	\$1,743.21
Groom	\$1,353.38	\$1,454.80	\$1,509.12	\$1,628.65	\$1,711.95	\$1,942.04
Herbert	\$1,692.26	\$1,819.06	\$1,886.99	\$2,036.44	\$2,140.61	\$2,428.30
Hinkler	\$1,289.51	\$1,386.14	\$1,437.91	\$1,551.79	\$1,631.16	\$1,850.39
Kennedy	\$1,686.19	\$1,812.54	\$1,880.22	\$2,029.14	\$2,132.93	\$2,419.59
Leichardt	\$1,525.72	\$1,640.05	\$1,701.30	\$1,836.04	\$1,929.95	\$2,189.34
Lilley	\$1,223.01	\$1,314.65	\$1,363.74	\$1,471.75	\$1,547.03	\$1,754.95
Longman	\$1,562.01	\$1,679.06	\$1,741.76	\$1,879.71	\$1,975.85	\$2,241.41
Maranoa	\$1,431.90	\$1,539.20	\$1,596.68	\$1,723.13	\$1,811.27	\$2,054.70
Mcpherson	\$1,606.88	\$1,727.29	\$1,791.79	\$1,933.70	\$2,032.61	\$2,305.79
Moncrieff	\$1,628.26	\$1,750.27	\$1,815.63	\$1,959.43	\$2,059.65	\$2,336.46
Moreton	\$1,461.33	\$1,570.83	\$1,629.49	\$1,758.54	\$1,848.49	\$2,096.93
Oxley	\$1,553.96	\$1,670.40	\$1,732.78	\$1,870.02	\$1,965.67	\$2,229.86
Petrie	\$1,432.29	\$1,539.62	\$1,597.12	\$1,723.61	\$1,811.77	\$2,055.27
Rankin	\$1,658.47	\$1,782.75	\$1,849.32	\$1,995.79	\$2,097.87	\$2,379.83
Ryan	\$1,364.47	\$1,466.71	\$1,521.48	\$1,641.99	\$1,725.97	\$1,957.94
Wide Bay	\$1,326.73	\$1,426.14	\$1,479.40	\$1,596.57	\$1,678.23	\$1,903.79
Wright	\$1,747.68	\$1,878.64	\$1,948.79	\$2,103.14	\$2,210.71	\$2,507.83
AVERAGE	\$1,525.63	\$1,639.95	\$1,701.19	\$1,835.93	\$1,929.83	\$2,189.20

Victoria

2017

	\$6.30	\$7.80	\$9	\$12	\$14	\$19
Aston	\$1,393.92	\$1,484.02	\$1,532.28	\$1,638.47	\$1,712.48	\$1,913.87
Ballarat	\$1,410.03	\$1,501.17	\$1,549.99	\$1,657.40	\$1,732.27	\$1,935.98
Batman	\$1,006.32	\$1,071.36	\$1,106.21	\$1,182.87	\$1,236.30	\$1,381.69
Bendigo	\$1,446.52	\$1,540.02	\$1,590.10	\$1,700.30	\$1,777.10	\$1,986.09
Bruce	\$1,184.17	\$1,260.71	\$1,301.72	\$1,391.93	\$1,454.80	\$1,625.88
Calwell	\$1,187.46	\$1,264.21	\$1,305.33	\$1,395.79	\$1,458.84	\$1,630.40
Casey	\$1,447.50	\$1,541.07	\$1,591.19	\$1,701.46	\$1,778.31	\$1,987.44
Chisholm	\$1,267.02	\$1,348.91	\$1,392.79	\$1,489.31	\$1,556.58	\$1,739.63
Corangamite	\$1,404.44	\$1,495.22	\$1,543.85	\$1,650.84	\$1,725.40	\$1,928.31
Corio	\$1,173.32	\$1,249.16	\$1,289.79	\$1,379.17	\$1,441.47	\$1,610.99
Deakin	\$1,238.75	\$1,318.81	\$1,361.71	\$1,456.07	\$1,521.84	\$1,700.81
Dunkley	\$1,224.28	\$1,303.41	\$1,345.81	\$1,439.07	\$1,504.07	\$1,680.95
Flinders	\$1,398.68	\$1,489.09	\$1,537.52	\$1,644.07	\$1,718.34	\$1,920.41
Gellibrand	\$1,034.10	\$1,100.94	\$1,136.74	\$1,215.52	\$1,270.43	\$1,419.83
Gippsland	\$1,445.20	\$1,538.62	\$1,588.66	\$1,698.75	\$1,775.49	\$1,984.28
Goldstein	\$1,454.41	\$1,548.42	\$1,598.78	\$1,709.57	\$1,786.79	\$1,996.92
Gorton	\$1,303.02	\$1,387.24	\$1,432.36	\$1,531.62	\$1,600.80	\$1,789.06
Higgins	\$1,318.80	\$1,404.04	\$1,449.71	\$1,550.17	\$1,620.19	\$1,810.73
Holt	\$1,155.57	\$1,230.26	\$1,270.28	\$1,358.31	\$1,419.66	\$1,586.61
Hotham	\$1,309.76	\$1,394.41	\$1,439.77	\$1,539.54	\$1,609.08	\$1,798.31
Indi	\$1,813.08	\$1,930.27	\$1,993.05	\$2,131.17	\$2,227.43	\$2,489.38
Isaacs	\$1,314.69	\$1,399.66	\$1,445.19	\$1,545.34	\$1,615.14	\$1,805.08
Jagajaga	\$1,173.98	\$1,249.86	\$1,290.51	\$1,379.95	\$1,442.28	\$1,611.89
Kooyong	\$1,460.33	\$1,554.72	\$1,605.28	\$1,716.53	\$1,794.06	\$2,005.05
La Trobe	\$1,388.66	\$1,478.42	\$1,526.50	\$1,632.29	\$1,706.02	\$1,906.64
Lalor	\$1,290.36	\$1,373.76	\$1,418.45	\$1,516.74	\$1,585.25	\$1,771.68
Mallee	\$2,115.86	\$2,252.62	\$2,325.89	\$2,487.07	\$2,599.41	\$2,905.10
Maribyrnong	\$1,169.38	\$1,244.96	\$1,285.45	\$1,374.54	\$1,436.62	\$1,605.57
Mcewen	\$1,756.20	\$1,869.72	\$1,930.53	\$2,064.32	\$2,157.56	\$2,411.29
Mcmillan	\$1,374.03	\$1,462.84	\$1,510.42	\$1,615.09	\$1,688.04	\$1,886.56
Melbourne	\$1,103.96	\$1,175.31	\$1,213.54	\$1,297.64	\$1,356.25	\$1,515.75
Melbourne Ports	\$1,185.82	\$1,262.46	\$1,303.52	\$1,393.86	\$1,456.82	\$1,628.14
Menzies	\$1,417.26	\$1,508.87	\$1,557.94	\$1,665.91	\$1,741.15	\$1,945.91
Murray	\$1,745.36	\$1,858.17	\$1,918.61	\$2,051.56	\$2,144.23	\$2,396.40
Scullin	\$1,170.36	\$1,246.01	\$1,286.54	\$1,375.70	\$1,437.84	\$1,606.93
Wannon	\$1,753.90	\$1,867.27	\$1,928.00	\$2,061.61	\$2,154.73	\$2,408.13
Wills	\$1,029.33	\$1,095.86	\$1,131.50	\$1,209.92	\$1,264.57	\$1,413.28
AVERAGE	\$1,353.13	\$1,440.59	\$1,487.45	\$1,590.53	\$1,662.37	\$1,857.86

Appendix C: 2018 Household Electricity Prices by Electorate Under Varying Gas Prices

New South Wales

<i>Electorate</i>	2018					
	\$6.30	\$7.80	\$9	\$12	\$14	\$19
	\$0.2445	\$0.2611	\$0.2700	\$0.2896	\$0.3033	\$0.3406
<i>Banks</i>	\$1,459.96	\$1,559.29	\$1,612.51	\$1,729.57	\$1,811.17	\$2,034.30
<i>Barton</i>	\$1,234.79	\$1,318.80	\$1,363.80	\$1,462.81	\$1,531.82	\$1,720.54
<i>Bennelong</i>	\$1,371.20	\$1,464.49	\$1,514.46	\$1,624.41	\$1,701.05	\$1,910.62
<i>Berowra</i>	\$2,167.68	\$2,315.16	\$2,394.17	\$2,567.99	\$2,689.13	\$3,020.43
<i>Blaxland</i>	\$1,387.36	\$1,481.75	\$1,532.32	\$1,643.56	\$1,721.10	\$1,933.14
<i>Bradfield</i>	\$1,984.90	\$2,119.95	\$2,192.29	\$2,351.45	\$2,462.38	\$2,765.75
<i>Calare</i>	\$1,420.12	\$1,516.74	\$1,568.50	\$1,682.37	\$1,761.74	\$1,978.78
<i>Chifley</i>	\$1,586.02	\$1,693.93	\$1,751.74	\$1,878.91	\$1,967.55	\$2,209.95
<i>Cook</i>	\$1,459.96	\$1,559.29	\$1,612.51	\$1,729.57	\$1,811.17	\$2,034.30
<i>Cowper</i>	\$1,210.68	\$1,293.05	\$1,337.18	\$1,434.26	\$1,501.92	\$1,686.95
<i>Cunningham</i>	\$1,385.09	\$1,479.33	\$1,529.81	\$1,640.88	\$1,718.29	\$1,929.98
<i>Dobell</i>	\$1,572.55	\$1,679.54	\$1,736.86	\$1,862.95	\$1,950.84	\$2,191.18
<i>Eden-Monaro</i>	\$1,323.98	\$1,414.06	\$1,462.31	\$1,568.48	\$1,642.47	\$1,844.82
<i>Farrer</i>	\$1,629.84	\$1,740.73	\$1,800.13	\$1,930.82	\$2,021.91	\$2,271.00
<i>Fowler</i>	\$1,741.01	\$1,859.46	\$1,922.92	\$2,062.52	\$2,159.82	\$2,425.91
<i>Gilmore</i>	\$1,136.66	\$1,213.99	\$1,255.42	\$1,346.57	\$1,410.09	\$1,583.81
<i>Grayndler</i>	\$1,124.75	\$1,201.27	\$1,242.27	\$1,332.46	\$1,395.32	\$1,567.22
<i>Greenway</i>	\$1,706.69	\$1,822.81	\$1,885.01	\$2,021.87	\$2,117.25	\$2,378.09
<i>Hughes</i>	\$1,883.09	\$2,011.21	\$2,079.84	\$2,230.84	\$2,336.08	\$2,623.89
<i>Hume</i>	\$1,905.21	\$2,034.83	\$2,104.28	\$2,257.05	\$2,363.52	\$2,654.71
<i>Hunter</i>	\$1,769.65	\$1,890.05	\$1,954.55	\$2,096.45	\$2,195.35	\$2,465.82
<i>Kingsford-Smith</i>	\$1,098.37	\$1,173.10	\$1,213.14	\$1,301.21	\$1,362.60	\$1,530.47
<i>Lindsay</i>	\$1,998.23	\$2,134.18	\$2,207.01	\$2,367.24	\$2,478.92	\$2,784.32
<i>Lyne</i>	\$1,279.03	\$1,366.05	\$1,412.66	\$1,515.22	\$1,586.70	\$1,782.19
<i>Macarthur</i>	\$1,721.58	\$1,838.71	\$1,901.46	\$2,039.51	\$2,135.72	\$2,398.84
<i>Mackellar</i>	\$1,662.45	\$1,775.56	\$1,836.15	\$1,969.46	\$2,062.36	\$2,316.45
<i>Macquarie</i>	\$1,714.49	\$1,831.14	\$1,893.63	\$2,031.11	\$2,126.92	\$2,388.96
<i>McMahon</i>	\$1,748.52	\$1,867.49	\$1,931.22	\$2,071.42	\$2,169.14	\$2,436.38
<i>Mitchell</i>	\$2,159.31	\$2,306.23	\$2,384.93	\$2,558.07	\$2,678.75	\$3,008.77
<i>New England</i>	\$1,465.63	\$1,565.35	\$1,618.77	\$1,736.29	\$1,818.20	\$2,042.20
<i>Newcastle</i>	\$1,277.33	\$1,364.23	\$1,410.79	\$1,513.21	\$1,584.59	\$1,779.82
<i>North Sydney</i>	\$1,134.39	\$1,211.57	\$1,252.92	\$1,343.88	\$1,407.28	\$1,580.65
<i>Page</i>	\$1,244.14	\$1,328.79	\$1,374.14	\$1,473.90	\$1,543.43	\$1,733.58

Parkes	\$1,623.31	\$1,733.76	\$1,792.93	\$1,923.09	\$2,013.81	\$2,261.92
Parramatta	\$1,286.68	\$1,374.22	\$1,421.12	\$1,524.30	\$1,596.20	\$1,792.86
Paterson	\$1,669.26	\$1,782.83	\$1,843.67	\$1,977.52	\$2,070.81	\$2,325.93
Reid	\$1,250.10	\$1,335.15	\$1,380.72	\$1,480.96	\$1,550.82	\$1,741.88
Richmond	\$1,209.55	\$1,291.84	\$1,335.92	\$1,432.91	\$1,500.51	\$1,685.37
Riverina	\$1,413.45	\$1,509.62	\$1,561.14	\$1,674.47	\$1,753.47	\$1,969.49
Robertson	\$1,622.46	\$1,732.85	\$1,791.99	\$1,922.08	\$2,012.76	\$2,260.73
Shortland	\$1,531.29	\$1,635.47	\$1,691.28	\$1,814.07	\$1,899.65	\$2,133.68
Sydney	\$914.04	\$976.22	\$1,009.54	\$1,082.83	\$1,133.91	\$1,273.61
Warringah	\$1,316.75	\$1,406.33	\$1,454.32	\$1,559.91	\$1,633.50	\$1,834.74
Watson	\$1,276.90	\$1,363.78	\$1,410.32	\$1,512.70	\$1,584.07	\$1,779.22
Wentworth	\$1,083.91	\$1,157.66	\$1,197.16	\$1,284.08	\$1,344.65	\$1,510.31
Werriwa	\$1,659.61	\$1,772.53	\$1,833.02	\$1,966.10	\$2,058.85	\$2,312.50
Whitlam	\$1,441.24	\$1,539.30	\$1,591.83	\$1,707.40	\$1,787.95	\$2,008.22
AVERAGE	\$1,494.96	\$1,596.67	\$1,651.16	\$1,771.04	\$1,854.59	\$2,083.07

2018

	\$6.30	\$7.80	\$9	\$12	\$14	\$19
Blair	\$1,367.13	\$1,469.57	\$1,524.45	\$1,645.19	\$1,729.34	\$1,961.77
Bonner	\$1,352.03	\$1,453.34	\$1,507.62	\$1,627.02	\$1,710.24	\$1,940.09
Bowman	\$1,565.54	\$1,682.85	\$1,745.70	\$1,883.95	\$1,980.32	\$2,246.47
Brisbane	\$965.52	\$1,037.87	\$1,076.63	\$1,161.90	\$1,221.33	\$1,385.48
Capricornia	\$1,494.57	\$1,606.57	\$1,666.56	\$1,798.56	\$1,890.55	\$2,144.64
Dawson	\$1,578.68	\$1,696.97	\$1,760.34	\$1,899.76	\$1,996.94	\$2,265.32
Dickson	\$1,678.50	\$1,804.27	\$1,871.65	\$2,019.88	\$2,123.20	\$2,408.56
Fadden	\$1,601.27	\$1,721.26	\$1,785.54	\$1,926.95	\$2,025.51	\$2,297.74
Fairfax	\$1,481.93	\$1,592.97	\$1,652.46	\$1,783.34	\$1,874.55	\$2,126.49
Fisher	\$1,415.75	\$1,521.84	\$1,578.67	\$1,703.70	\$1,790.84	\$2,031.53
Flynn	\$1,510.66	\$1,623.86	\$1,684.50	\$1,817.91	\$1,910.90	\$2,167.72
Forde	\$1,675.67	\$1,801.24	\$1,868.50	\$2,016.49	\$2,119.63	\$2,404.51
Griffith	\$1,130.29	\$1,214.99	\$1,260.36	\$1,360.18	\$1,429.75	\$1,621.91
Groom	\$1,259.21	\$1,353.57	\$1,404.11	\$1,515.32	\$1,592.83	\$1,806.90
Herbert	\$1,574.50	\$1,692.49	\$1,755.69	\$1,894.74	\$1,991.65	\$2,259.33
Hinkler	\$1,199.78	\$1,289.69	\$1,337.85	\$1,443.81	\$1,517.66	\$1,721.63
Kennedy	\$1,568.86	\$1,686.41	\$1,749.39	\$1,887.94	\$1,984.51	\$2,251.23
Leichardt	\$1,419.56	\$1,525.93	\$1,582.91	\$1,708.28	\$1,795.66	\$2,036.99
Lilley	\$1,137.90	\$1,223.17	\$1,268.85	\$1,369.34	\$1,439.38	\$1,632.84
Longman	\$1,453.32	\$1,562.22	\$1,620.56	\$1,748.91	\$1,838.37	\$2,085.44
Maranoa	\$1,332.26	\$1,432.09	\$1,485.57	\$1,603.23	\$1,685.23	\$1,911.73
Mcpherson	\$1,495.07	\$1,607.10	\$1,667.11	\$1,799.15	\$1,891.17	\$2,145.34
Moncrieff	\$1,514.96	\$1,628.48	\$1,689.29	\$1,823.08	\$1,916.33	\$2,173.89
Moreton	\$1,359.64	\$1,461.52	\$1,516.10	\$1,636.18	\$1,719.87	\$1,951.02
Oxley	\$1,445.83	\$1,554.17	\$1,612.21	\$1,739.90	\$1,828.89	\$2,074.70
Petrie	\$1,332.63	\$1,432.49	\$1,485.98	\$1,603.67	\$1,685.70	\$1,912.26
Rankin	\$1,543.07	\$1,658.70	\$1,720.64	\$1,856.92	\$1,951.90	\$2,214.23
Ryan	\$1,269.52	\$1,364.65	\$1,415.61	\$1,527.73	\$1,605.87	\$1,821.70
Wide Bay	\$1,234.41	\$1,326.91	\$1,376.46	\$1,485.47	\$1,561.45	\$1,771.31
Wright	\$1,626.07	\$1,747.92	\$1,813.19	\$1,956.80	\$2,056.88	\$2,333.33
AVERAGE	\$1,419.47	\$1,525.84	\$1,582.82	\$1,708.18	\$1,795.55	\$2,036.87

2018

<i>Electorate</i>	\$6.30	\$7.80	\$9	\$12	\$14	\$19
<i>Aston</i>	\$1,480.13	\$1,575.80	\$1,627.05	\$1,739.80	\$1,818.39	\$2,032.23
<i>Ballarat</i>	\$1,497.23	\$1,594.01	\$1,645.85	\$1,759.91	\$1,839.40	\$2,055.72
<i>Batman</i>	\$1,068.55	\$1,137.62	\$1,174.62	\$1,256.02	\$1,312.76	\$1,467.14
<i>Bendigo</i>	\$1,535.98	\$1,635.26	\$1,688.45	\$1,805.46	\$1,887.01	\$2,108.92
<i>Bruce</i>	\$1,257.41	\$1,338.68	\$1,382.22	\$1,478.01	\$1,544.77	\$1,726.44
<i>Calwell</i>	\$1,260.90	\$1,342.40	\$1,386.06	\$1,482.11	\$1,549.06	\$1,731.23
<i>Casey</i>	\$1,537.03	\$1,636.38	\$1,689.60	\$1,806.69	\$1,888.29	\$2,110.36
<i>Chisholm</i>	\$1,345.38	\$1,432.34	\$1,478.93	\$1,581.41	\$1,652.85	\$1,847.22
<i>Corangamite</i>	\$1,491.30	\$1,587.69	\$1,639.33	\$1,752.93	\$1,832.11	\$2,047.57
<i>Corio</i>	\$1,245.89	\$1,326.42	\$1,369.56	\$1,464.47	\$1,530.62	\$1,710.62
<i>Deakin</i>	\$1,315.36	\$1,400.38	\$1,445.92	\$1,546.13	\$1,615.96	\$1,806.00
<i>Dunkley</i>	\$1,300.00	\$1,384.02	\$1,429.04	\$1,528.07	\$1,597.09	\$1,784.91
<i>Flinders</i>	\$1,485.19	\$1,581.19	\$1,632.61	\$1,745.75	\$1,824.61	\$2,039.18
<i>Gellibrand</i>	\$1,098.05	\$1,169.03	\$1,207.05	\$1,290.70	\$1,349.00	\$1,507.64
<i>Gippsland</i>	\$1,534.58	\$1,633.77	\$1,686.91	\$1,803.81	\$1,885.29	\$2,107.00
<i>Goldstein</i>	\$1,544.36	\$1,644.18	\$1,697.66	\$1,815.30	\$1,897.30	\$2,120.42
<i>Gorton</i>	\$1,383.60	\$1,473.03	\$1,520.94	\$1,626.35	\$1,699.81	\$1,899.71
<i>Higgins</i>	\$1,400.36	\$1,490.87	\$1,539.36	\$1,646.04	\$1,720.39	\$1,922.71
<i>Holt</i>	\$1,227.04	\$1,306.35	\$1,348.84	\$1,442.31	\$1,507.46	\$1,684.74
<i>Hotham</i>	\$1,390.76	\$1,480.65	\$1,528.81	\$1,634.76	\$1,708.60	\$1,909.53
<i>Indi</i>	\$1,925.21	\$2,049.65	\$2,116.31	\$2,262.97	\$2,365.19	\$2,643.34
<i>Isaacs</i>	\$1,396.00	\$1,486.23	\$1,534.57	\$1,640.91	\$1,715.03	\$1,916.72
<i>Jagajaga</i>	\$1,246.59	\$1,327.16	\$1,370.33	\$1,465.29	\$1,531.48	\$1,711.58
<i>Kooyong</i>	\$1,550.64	\$1,650.87	\$1,704.56	\$1,822.69	\$1,905.02	\$2,129.05
<i>La Trobe</i>	\$1,474.54	\$1,569.85	\$1,620.91	\$1,733.24	\$1,811.53	\$2,024.56
<i>Lalor</i>	\$1,370.16	\$1,458.73	\$1,506.17	\$1,610.55	\$1,683.30	\$1,881.25
<i>Mallee</i>	\$2,246.72	\$2,391.94	\$2,469.74	\$2,640.89	\$2,760.18	\$3,084.77
<i>Maribyrnong</i>	\$1,241.70	\$1,321.96	\$1,364.96	\$1,459.55	\$1,525.47	\$1,704.87
<i>Mcewen</i>	\$1,864.82	\$1,985.35	\$2,049.93	\$2,191.99	\$2,291.00	\$2,560.42
<i>Mcmillan</i>	\$1,459.01	\$1,553.31	\$1,603.83	\$1,714.98	\$1,792.44	\$2,003.23
<i>Melbourne</i>	\$1,172.23	\$1,248.00	\$1,288.59	\$1,377.89	\$1,440.13	\$1,609.49
<i>Melbourne Ports</i>	\$1,259.15	\$1,340.54	\$1,384.14	\$1,480.06	\$1,546.92	\$1,728.83
<i>Menzies</i>	\$1,504.91	\$1,602.18	\$1,654.29	\$1,768.94	\$1,848.84	\$2,066.26
<i>Murray</i>	\$1,853.30	\$1,973.09	\$2,037.26	\$2,178.45	\$2,276.85	\$2,544.60
<i>Scullin</i>	\$1,242.75	\$1,323.07	\$1,366.11	\$1,460.78	\$1,526.76	\$1,706.31
<i>Wannon</i>	\$1,862.38	\$1,982.75	\$2,047.24	\$2,189.11	\$2,288.00	\$2,557.07
<i>Wills</i>	\$1,092.99	\$1,163.64	\$1,201.48	\$1,284.75	\$1,342.78	\$1,500.69
<i>AVERAGE</i>	\$1,436.82	\$1,529.69	\$1,579.44	\$1,688.89	\$1,765.18	\$1,972.77

Appendix D: 2019 Household Electricity Prices by Electorate Under Varying Gas Prices

New South Wales

Electorate	2019					
	\$6.30	\$7.80	\$9	\$12	\$14	\$19
	\$0.2445	\$0.2611	\$0.2700	\$0.2896	\$0.3033	\$0.3406
Banks	\$1,481.86	\$1,582.68	\$1,636.69	\$1,755.52	\$1,838.33	\$2,064.82
Barton	\$1,253.31	\$1,338.58	\$1,384.26	\$1,484.76	\$1,554.80	\$1,746.35
Bennelong	\$1,391.76	\$1,486.45	\$1,537.18	\$1,648.78	\$1,726.56	\$1,939.27
Berowra	\$2,200.20	\$2,349.89	\$2,430.08	\$2,606.51	\$2,729.47	\$3,065.74
Blaxland	\$1,408.17	\$1,503.98	\$1,555.30	\$1,668.22	\$1,746.92	\$1,962.14
Bradfield	\$2,014.68	\$2,151.75	\$2,225.18	\$2,386.72	\$2,499.32	\$2,807.23
Calare	\$1,441.42	\$1,539.49	\$1,592.02	\$1,707.60	\$1,788.16	\$2,008.46
Chifley	\$1,609.81	\$1,719.34	\$1,778.01	\$1,907.10	\$1,997.06	\$2,243.10
Cook	\$1,481.86	\$1,582.68	\$1,636.69	\$1,755.52	\$1,838.33	\$2,064.82
Cowper	\$1,228.84	\$1,312.45	\$1,357.23	\$1,455.77	\$1,524.45	\$1,712.26
Cunningham	\$1,405.87	\$1,501.52	\$1,552.76	\$1,665.49	\$1,744.06	\$1,958.93
Dobell	\$1,596.14	\$1,704.73	\$1,762.91	\$1,890.90	\$1,980.10	\$2,224.05
Eden-Monaro	\$1,343.84	\$1,435.27	\$1,484.25	\$1,592.00	\$1,667.11	\$1,872.49
Farrer	\$1,654.28	\$1,766.84	\$1,827.13	\$1,959.78	\$2,052.23	\$2,305.07
Fowler	\$1,767.12	\$1,887.35	\$1,951.76	\$2,093.46	\$2,192.22	\$2,462.30
Gilmore	\$1,153.71	\$1,232.20	\$1,274.25	\$1,366.77	\$1,431.24	\$1,607.57
Grayndler	\$1,141.62	\$1,219.29	\$1,260.90	\$1,352.44	\$1,416.24	\$1,590.73
Greenway	\$1,732.29	\$1,850.15	\$1,913.29	\$2,052.19	\$2,149.01	\$2,413.76
Hughes	\$1,911.34	\$2,041.38	\$2,111.04	\$2,264.30	\$2,371.12	\$2,663.24
Hume	\$1,933.79	\$2,065.36	\$2,135.84	\$2,290.90	\$2,398.97	\$2,694.53
Hunter	\$1,796.20	\$1,918.40	\$1,983.87	\$2,127.90	\$2,228.28	\$2,502.81
Kingsford-Smith	\$1,114.85	\$1,190.70	\$1,231.33	\$1,320.73	\$1,383.04	\$1,553.42
Lindsay	\$2,028.20	\$2,166.20	\$2,240.12	\$2,402.75	\$2,516.10	\$2,826.09
Lyne	\$1,298.21	\$1,386.54	\$1,433.85	\$1,537.95	\$1,610.51	\$1,808.92
Macarthur	\$1,747.40	\$1,866.29	\$1,929.98	\$2,070.10	\$2,167.75	\$2,434.82
Mackellar	\$1,687.39	\$1,802.19	\$1,863.69	\$1,999.00	\$2,093.30	\$2,351.19
Macquarie	\$1,740.21	\$1,858.61	\$1,922.03	\$2,061.57	\$2,158.83	\$2,424.79
McMahon	\$1,774.75	\$1,895.50	\$1,960.18	\$2,102.49	\$2,201.68	\$2,472.93
Mitchell	\$2,191.70	\$2,340.82	\$2,420.70	\$2,596.45	\$2,718.93	\$3,053.91
New England	\$1,487.62	\$1,588.83	\$1,643.05	\$1,762.34	\$1,845.48	\$2,072.84
Newcastle	\$1,296.48	\$1,384.69	\$1,431.95	\$1,535.91	\$1,608.36	\$1,806.51
North Sydney	\$1,151.41	\$1,229.74	\$1,271.71	\$1,364.04	\$1,428.39	\$1,604.36
Page	\$1,262.81	\$1,348.72	\$1,394.75	\$1,496.01	\$1,566.58	\$1,759.59

Parkes	\$1,647.66	\$1,759.77	\$1,819.82	\$1,951.94	\$2,044.02	\$2,295.84
Parramatta	\$1,305.98	\$1,394.84	\$1,442.44	\$1,547.16	\$1,620.15	\$1,819.75
Paterson	\$1,694.30	\$1,809.57	\$1,871.32	\$2,007.18	\$2,101.87	\$2,360.82
Reid	\$1,268.85	\$1,355.18	\$1,401.43	\$1,503.17	\$1,574.08	\$1,768.01
Richmond	\$1,227.69	\$1,311.22	\$1,355.96	\$1,454.41	\$1,523.02	\$1,710.65
Riverina	\$1,434.65	\$1,532.26	\$1,584.55	\$1,699.59	\$1,779.77	\$1,999.04
Robertson	\$1,646.80	\$1,758.84	\$1,818.87	\$1,950.91	\$2,042.95	\$2,294.64
Shortland	\$1,554.26	\$1,660.00	\$1,716.65	\$1,841.28	\$1,928.14	\$2,165.69
Sydney	\$927.75	\$990.87	\$1,024.68	\$1,099.07	\$1,150.92	\$1,292.72
Warringah	\$1,336.50	\$1,427.43	\$1,476.14	\$1,583.31	\$1,658.00	\$1,862.26
Watson	\$1,296.05	\$1,384.23	\$1,431.47	\$1,535.39	\$1,607.83	\$1,805.91
Wentworth	\$1,100.17	\$1,175.02	\$1,215.12	\$1,303.34	\$1,364.82	\$1,532.97
Werriwa	\$1,684.51	\$1,799.12	\$1,860.51	\$1,995.59	\$2,089.73	\$2,347.18
Whitlam	\$1,462.86	\$1,562.39	\$1,615.71	\$1,733.01	\$1,814.76	\$2,038.34
AVERAGE	\$1,517.39	\$1,620.62	\$1,675.93	\$1,797.60	\$1,882.40	\$2,114.32

2019

	\$6.30	\$7.80	\$9	\$12	\$14	\$19
Blair	\$1,412.87	\$1,518.74	\$1,575.45	\$1,700.23	\$1,787.20	\$2,027.40
Bonner	\$1,397.26	\$1,501.96	\$1,558.05	\$1,681.45	\$1,767.45	\$2,005.00
Bowman	\$1,617.91	\$1,739.15	\$1,804.10	\$1,946.98	\$2,046.57	\$2,321.63
Brisbane	\$997.83	\$1,072.60	\$1,112.65	\$1,200.77	\$1,262.19	\$1,431.83
Capricornia	\$1,544.57	\$1,660.31	\$1,722.32	\$1,858.73	\$1,953.80	\$2,216.39
Dawson	\$1,631.49	\$1,753.74	\$1,819.24	\$1,963.32	\$2,063.74	\$2,341.11
Dickson	\$1,734.65	\$1,864.63	\$1,934.27	\$2,087.46	\$2,194.23	\$2,489.13
Fadden	\$1,654.84	\$1,778.84	\$1,845.27	\$1,991.42	\$2,093.27	\$2,374.61
Fairfax	\$1,531.51	\$1,646.27	\$1,707.74	\$1,843.00	\$1,937.27	\$2,197.63
Fisher	\$1,463.11	\$1,572.75	\$1,631.48	\$1,760.70	\$1,850.75	\$2,099.50
Flynn	\$1,561.20	\$1,678.18	\$1,740.85	\$1,878.73	\$1,974.82	\$2,240.24
Forde	\$1,731.73	\$1,861.49	\$1,931.01	\$2,083.95	\$2,190.54	\$2,484.95
Griffith	\$1,168.11	\$1,255.64	\$1,302.53	\$1,405.69	\$1,477.59	\$1,676.17
Groom	\$1,301.34	\$1,398.85	\$1,451.09	\$1,566.01	\$1,646.11	\$1,867.35
Herbert	\$1,627.18	\$1,749.11	\$1,814.43	\$1,958.13	\$2,058.28	\$2,334.92
Hinkler	\$1,239.92	\$1,332.83	\$1,382.61	\$1,492.11	\$1,568.43	\$1,779.23
Kennedy	\$1,621.34	\$1,742.83	\$1,807.92	\$1,951.10	\$2,050.90	\$2,326.54
Leichardt	\$1,467.05	\$1,576.98	\$1,635.87	\$1,765.43	\$1,855.73	\$2,105.14
Lilley	\$1,175.97	\$1,264.09	\$1,311.30	\$1,415.15	\$1,487.54	\$1,687.46
Longman	\$1,501.94	\$1,614.49	\$1,674.78	\$1,807.42	\$1,899.87	\$2,155.21
Maranoa	\$1,376.83	\$1,480.00	\$1,535.27	\$1,656.87	\$1,741.61	\$1,975.69
Mcpherson	\$1,545.08	\$1,660.86	\$1,722.88	\$1,859.34	\$1,954.44	\$2,217.12
Moncrieff	\$1,565.64	\$1,682.96	\$1,745.80	\$1,884.07	\$1,980.44	\$2,246.61
Moreton	\$1,405.13	\$1,510.42	\$1,566.82	\$1,690.92	\$1,777.41	\$2,016.29
Oxley	\$1,494.20	\$1,606.17	\$1,666.15	\$1,798.11	\$1,890.08	\$2,144.10
Petrie	\$1,377.21	\$1,480.41	\$1,535.70	\$1,657.32	\$1,742.09	\$1,976.23
Rankin	\$1,594.69	\$1,714.19	\$1,778.21	\$1,919.04	\$2,017.20	\$2,288.31
Ryan	\$1,311.99	\$1,410.31	\$1,462.97	\$1,578.84	\$1,659.60	\$1,882.65
Wide Bay	\$1,275.70	\$1,371.30	\$1,422.51	\$1,535.17	\$1,613.69	\$1,830.57
Wright	\$1,680.47	\$1,806.39	\$1,873.85	\$2,022.26	\$1,613.69	\$2,411.39
AVERAGE	\$1,466.96	\$1,576.88	\$1,635.77	\$1,765.32	\$1,838.55	\$2,105.01

<i>Electorate</i>	<i>\$6.30</i>	<i>\$7.80</i>	<i>\$9</i>	<i>\$12</i>	<i>\$14</i>	<i>\$19</i>
Aston	\$1,347.68	\$1,434.79	\$1,481.45	\$1,584.12	\$1,655.67	\$1,850.38
Ballarat	\$1,363.25	\$1,451.37	\$1,498.57	\$1,602.42	\$1,674.80	\$1,871.76
Batman	\$972.93	\$1,035.82	\$1,069.51	\$1,143.63	\$1,195.28	\$1,335.85
Bendigo	\$1,398.53	\$1,488.93	\$1,537.36	\$1,643.89	\$1,718.15	\$1,920.20
Bruce	\$1,144.89	\$1,218.89	\$1,258.53	\$1,345.75	\$1,406.54	\$1,571.95
Calwell	\$1,148.07	\$1,222.27	\$1,262.03	\$1,349.49	\$1,410.44	\$1,576.31
Casey	\$1,399.49	\$1,489.94	\$1,538.40	\$1,645.01	\$1,719.32	\$1,921.51
Chisholm	\$1,224.99	\$1,304.17	\$1,346.58	\$1,439.90	\$1,504.94	\$1,681.92
Corangamite	\$1,357.85	\$1,445.61	\$1,492.63	\$1,596.07	\$1,668.17	\$1,864.34
Corio	\$1,134.40	\$1,207.72	\$1,247.00	\$1,333.42	\$1,393.65	\$1,557.55
Deakin	\$1,197.65	\$1,275.06	\$1,316.54	\$1,407.77	\$1,471.36	\$1,644.39
Dunkley	\$1,183.67	\$1,260.17	\$1,301.16	\$1,391.33	\$1,454.18	\$1,625.19
Flinders	\$1,352.29	\$1,439.69	\$1,486.52	\$1,589.53	\$1,661.33	\$1,856.70
Gellibrand	\$999.79	\$1,064.41	\$1,099.03	\$1,175.20	\$1,228.28	\$1,372.73
Gippsland	\$1,397.26	\$1,487.57	\$1,535.96	\$1,642.40	\$1,716.59	\$1,918.46
Goldstein	\$1,406.16	\$1,497.05	\$1,545.74	\$1,652.86	\$1,727.52	\$1,930.68
Gorton	\$1,259.79	\$1,341.22	\$1,384.84	\$1,480.81	\$1,547.70	\$1,729.71
Higgins	\$1,275.05	\$1,357.46	\$1,401.61	\$1,498.75	\$1,566.44	\$1,750.66
Holt	\$1,117.24	\$1,189.45	\$1,228.14	\$1,313.25	\$1,372.57	\$1,533.98
Hotham	\$1,266.31	\$1,348.16	\$1,392.01	\$1,488.47	\$1,555.70	\$1,738.66
Indi	\$1,752.93	\$1,866.24	\$1,926.93	\$2,060.47	\$2,153.54	\$2,406.80
Isaacs	\$1,271.07	\$1,353.23	\$1,397.25	\$1,494.08	\$1,561.56	\$1,745.20
Jagajaga	\$1,135.04	\$1,208.40	\$1,247.70	\$1,334.17	\$1,394.43	\$1,558.42
Kooyong	\$1,411.88	\$1,503.14	\$1,552.03	\$1,659.59	\$1,734.55	\$1,938.53
La Trobe	\$1,342.59	\$1,429.37	\$1,475.86	\$1,578.14	\$1,649.42	\$1,843.39
Lalor	\$1,247.55	\$1,328.19	\$1,371.39	\$1,466.43	\$1,532.67	\$1,712.91
Mallee	\$2,045.67	\$2,177.90	\$2,248.73	\$2,404.57	\$2,513.18	\$2,808.73
Maribyrnong	\$1,130.59	\$1,203.66	\$1,242.81	\$1,328.94	\$1,388.97	\$1,552.31
Mcewen	\$1,697.94	\$1,807.69	\$1,866.49	\$1,995.84	\$2,085.99	\$2,331.30
Mcmillan	\$1,328.45	\$1,414.31	\$1,460.31	\$1,561.51	\$1,632.05	\$1,823.97
Melbourne	\$1,067.33	\$1,136.32	\$1,173.28	\$1,254.59	\$1,311.26	\$1,465.46
Melbourne Ports	\$1,146.48	\$1,220.58	\$1,260.28	\$1,347.62	\$1,408.49	\$1,574.13
Menzies	\$1,370.24	\$1,458.81	\$1,506.26	\$1,610.64	\$1,683.39	\$1,881.36
Murray	\$1,687.46	\$1,796.53	\$1,854.96	\$1,983.51	\$2,073.10	\$2,316.90
Scullin	\$1,131.54	\$1,204.68	\$1,243.86	\$1,330.06	\$1,390.14	\$1,553.62
Wannon	\$1,695.72	\$1,805.33	\$1,864.04	\$1,993.22	\$2,083.25	\$2,328.25
Wills	\$995.18	\$1,059.51	\$1,093.97	\$1,169.78	\$1,222.62	\$1,366.40
AVERAGE	\$1,308.24	\$1,392.80	\$1,438.10	\$1,537.76	\$1,607.22	\$1,796.23

Appendix E: Methodology

Data sources:

1. <https://www.energy.gov.au/sites/g/files/net3411/f/independent-review-future-nem-blueprint-for-the-future-2017.pdf>
2. <https://www.accc.gov.au/system/files/ACCC%20Retail%20Electricity%20Pricing%20Inquiry%20-%20Preliminary%20Report%20-%2022%20September%202017.pdf>
3. https://www.aemo.com.au//media/Files/Electricity/NEM/Planning_and_Forecasting/EFI/Jacobs-Retail-electricity-price-history-and-projections_Final-Public-Report-June-2017.pdf
4. <http://www.aemc.gov.au/Markets-Reviews-Advice/Retail-Electricity-Price-Movements-2012/Final/AEMC-Documents/ELECTRICITY-PRICE-TRENDS-FINAL-REPORT>
5. <http://www.aemc.gov.au/getattachment/be91ba47-45df-48ee-9dde-e67d68d2e4d4/2016-Electricity-Price-Trends-Report.aspx>
6. <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4670.02012?OpenDocument>.

Electricity Consumption:

1. Data for the years 2010-2012 were obtained from the ABS – Electricity Supply for residential non-generating meters – Data Source 6.
2. The data were obtained for SA2 regions and then re-classified into electorates based on ABS classification.
3. The data for 2013,2014,2015 was obtained from the Office of the Chief Economist and Australian Energy Statistics from the ABS; and the changing trends in mean energy consumption per state was used to determine trend levels for the electorates.
4. The data for 2016 was obtained from the AEMC annual report (Source 5) as the mean energy consumption per state for the representative consumer and the previous proportions were used to distribute it for each electorate.
5. For 2017-2019, the consumption was forecasted based on 2016 data. 3 estimates were obtained (Low, Median, High) which were 90%, 100% and 110% of 2016 consumption levels accordingly.

Electricity prices:

1. Electricity prices from 2010-2016 were obtained from the AEMC report and the Jacobs Report based on AEMC data (Source 3 and 4).
2. 2017-2019 prices were forecasted based on trends obtained from the Jacobs report (Source 3) that used 2016 prices as a base to predict low, median and high outcomes.
3. Total residential electricity bills were calculated by multiplying energy consumption per year (kWh) into the price per kWh.

Gas Model:

1. Gas prices at present taken as \$9/GJ according to spot prices and median estimates from Data Source 1.
2. The other estimates for the different gas prices were obtained from Data Source 2 and Data Source 1.
3. They were then calculated as increases/decreases from the present average price of gas at \$9/GJ as a percentage out of 100.
4. Data extracted from the ACCC report show that wholesale electricity costs for NSW, QLD and VIC account for **22%, 24% and 21%** of the residential electricity bill respectively.
5. Since wholesale costs account for 22%, 24% and 21% (NSW, QLD, VIC), these percentages have been calculated out of the relevant percentage increase in price of gas for each state to get the numbers respectively. For example, an increase in price from \$9/GJ to \$14/GJ is a 56% rise and accordingly:
 - 22% of 56% = 12.32% for NSW
 - 24% of 56% = 13.44% for QLD
 - 21% of 56% = 11.76% for VIC.
6. Therefore, calculations suggest that other things remaining the same in the wholesale electricity cost, when gas increases by 56%, residential prices go up at minimum by the above percentages for each state; for increases from \$9 to \$14.
7. This methodology was applied to the other estimates of gas prices.

References

- ⁱ Australian Energy Regulator, 'State of the Energy Market', May 2017, Accessed online: <https://www.aer.gov.au/system/files/AER%20State%20of%20the%20energy%20market%202017%20-%20A4.pdf>.
- ⁱⁱ Australian Competition and Consumer Commission, Retail Pricing Inquiry Preliminary Report September 2017. <https://www.accc.gov.au/system/files/ACCC%20Retail%20Electricity%20Pricing%20Inquiry%20-%20Preliminary%20Report%20-%202022%20September%202017.pdf>
- ⁱⁱⁱ Finkel, A. 2017. 'Independent Review into the Future Security of the National Electricity Market'. <https://www.environment.gov.au/system/files/resources/1d6b0464-6162-4223-ac08-3395a6b1c7fa/files/electricity-market-review-final-report.pdf>
- ^{iv} Australian Competition and Consumer Commission, Retail Pricing Inquiry Preliminary Report September 2017. <https://www.accc.gov.au/system/files/ACCC%20Retail%20Electricity%20Pricing%20Inquiry%20-%20Preliminary%20Report%20-%202022%20September%202017.pdf>
- ^v ABC News 2017, 'Power Prices up 63pc since 2007, ACCC report shows, as watchdog casts doubt on Clean Energy Target, Accessed online: <http://www.abc.net.au/news/2017-10-16/clean-energy-target-not-certain-to-lower-power-prices-accc/9052094>
- ^{vi} <http://www.smh.com.au/federal-politics/political-news/gas-crisis-three-times-bigger-than-thought-turnbull-says-20170925-gyo418.html>
- ^{vii} Australian Competition and Consumer Commission, Retail Pricing Inquiry Preliminary Report September 2017. <https://www.accc.gov.au/system/files/ACCC%20Retail%20Electricity%20Pricing%20Inquiry%20-%20Preliminary%20Report%20-%202022%20September%202017.pdf>
- ^{viii} Ibid.
- ^{ix} Australian Competition and Consumer Commission, Retail Pricing Inquiry Preliminary Report September 2017. <https://www.accc.gov.au/system/files/ACCC%20Retail%20Electricity%20Pricing%20Inquiry%20-%20Preliminary%20Report%20-%202022%20September%202017.pdf>

^x Australian Competition and Consumer Commission, Retail Pricing Inquiry Preliminary Report September 2017.

<https://www.accc.gov.au/system/files/ACCC%20Retail%20Electricity%20Pricing%20Inquiry%20-%20Preliminary%20Report%20-%202022%20September%202017.pdf>

^{xi} Australian Energy Regulator, 'State of the Energy Market', May 2017.

<https://www.aer.gov.au/system/files/AER%20State%20of%20the%20energy%20market%202017%20-%20A4.pdf>

^{xii} Australian Competition and Consumer Commission, Retail Pricing Inquiry Preliminary Report September 2017. Page 90.

<https://www.accc.gov.au/system/files/ACCC%20Retail%20Electricity%20Pricing%20Inquiry%20-%20Preliminary%20Report%20-%202022%20September%202017.pdf>

^{xiii} ABC News, September 2017, 'Gas, not coal, the key to fixing Australia's electricity mess', Accessed online: <http://www.abc.net.au/news/2017-09-11/gas-not-coal-the-fix-to-australias-soaring-electricity-prices/8890818>.

^{xiv} Climate Council, 'State of Solar 2016: Globally and In Australia', Accessed online: <https://www.climatecouncil.org.au/uploads/4127a8c364c1f9fa8ab096b04cd93f78.pdf>,

^{xv} Australian Competition and Consumer Commission, Retail Pricing Inquiry Preliminary Report September 2017.

<https://www.accc.gov.au/system/files/ACCC%20Retail%20Electricity%20Pricing%20Inquiry%20-%20Preliminary%20Report%20-%202022%20September%202017.pdf>

^{xvi} The Australian Government Department of Industry, Innovation and Science, 'The Australian Domestic Gas Security Mechanism', Accessed online:

<https://industry.gov.au/resource/UpstreamPetroleum/AustralianLiquefiedNaturalGas/Pages/Australian-Domestic-Gas-Security-Mechanism.aspx>.

^{xix} Ibid.

^{xx} HopgoodGanim Lawyers, June 2017, 'New controls for LNG exports- How do they work?', Accessed online:

http://www.hopgoodganim.com.au/page/Publications/New_controls_for_LNG_exports_-_How_do_they_work_-_13_June_2017/.

^{xxi} The Australian Government Department of Industry, Innovation and Science, 2017. 'Regulation Impact Statement, Australian Domestic Gas Security Mechanism'. Accessed online:

http://ris.pmc.gov.au/sites/default/files/posts/2017/11/regulation_impact_statement.pdf

^{xxiii} Finkel, A. 2017. 'Independent Review into the Future Security of the National Electricity Market'. <https://www.environment.gov.au/system/files/resources/1d6b0464-6162-4223-ac08-3395a6b1c7fa/files/electricity-market-review-final-report.pdf>.