

The NEM

Where prices are high
and innovation is low



Observations from the Vinnies' Tariff-Tracking Project



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The NEM – Where prices are high and innovation is low

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Melbourne, November 2023



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Report reference: St Vincent de Paul Society and Alvis Consulting,
The NEM – Where prices are high and innovation is low
Melbourne, November 2023

Disclaimer

The energy offers, tariffs and bill calculations presented in this paper and associated workbooks should be used as a general guide only and should not be relied upon. The workbooks are not an appropriate substitute for obtaining an offer from an energy retailer. The information presented in this paper and the workbooks is not provided as financial advice. While we have taken great care to ensure accuracy of the information provided in this paper and the workbooks, they are suitable for use only as a research and advocacy tool. We do not accept any legal responsibility for errors or inaccuracies. The St Vincent de Paul Society and Alviss Consulting Pty Ltd do not accept liability for any action taken based on the information provided in this paper or the associated workbooks or for any loss, economic or otherwise, suffered as a result of reliance on the information presented. If you would like to obtain information about energy offers available to you as a customer, go to the relevant regulator's website or contact the energy retailers directly.

Acknowledgements

This project was funded by Energy Consumers Australia (www.energyconsumersaustralia.com.au) as part of its grants process for consumer advocacy projects and research projects for the benefit of consumers of electricity and natural gas.

The views expressed in this document do not necessarily reflect the views of Energy Consumers Australia.

We also wish to thank and acknowledge the efforts of the various retailers and other stakeholders that review and provide feedback on these reports. While any errors that may occur are our own, we appreciate their views, suggestions and cooperation.

Interactive online map

Key findings from the Vinnies' Tariff-Tracking project are also presented as an interactive online map. The updated map is available at the St Vincent de Paul Society's website:

https://www.vinnies.org.au/page/Our_Impact/Incomes_Support_Cost_of_Living/Energy/

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Background: The Tariff-Tracking Project

The St Vincent de Paul Society, in conjunction with Alviss Consulting, has been tracking changes to residential energy tariffs and reporting on household impacts since 2010. Initially the Tariff-Tracking project only covered Victoria but has since expanded to include New South Wales, Queensland, South Australia, Tasmania and the Australian Capital Territory.

The rationale for tracking changes to domestic energy prices has been to document price changes, analyse market developments and inform the broader community about bill impacts and potential savings to be made.

In our view, there is still a limited knowledge and understanding in the community of the various energy tariffs available, how they are changing, and how tariff changes impact on households' energy bills and energy affordability more broadly.

Only by improving this awareness and understanding can we ensure that the regulatory framework (for example, in relation to price information and disclosure) is adequate, to and promote a competitive retail market. Furthermore, this increased knowledge will allow for close monitoring of the impact price and tariff changes have on households' bills, and the affordability of this essential service.

In addition, a key aim of this project has been to document and analyse price and product developments arising from government policies and industry innovations, including the deregulation of retail prices, 'green policies', smart meter rollouts and transitions towards other smart grid developments.

With the introduction of the Default Market Offer (DMO) in NSW, South East Queensland and South Australia and the Victorian Default Offer (VDO) in Victoria from 1 July 2019 all the previously deregulated electricity retail markets are again regulated. The DMO and the VDO are significant developments that the Tariff-Tracking project will monitor and analyse the impact of.

The Australian Energy Regulator's (AER) DMO is expressed as an annual bill for a set consumption level and retailers are still able to "translate the annual amount into different tariff structures".¹ The Regulations stipulate that retailers must structure their prices to not exceed the annual DMO price for that consumption level.² The initial DMO took effect on 1 July 2019, and was amended in July 2020, 2021, 2022 and 2023.

The VDO is set by the Essential Services Commission (ESC) and the initial VDO took effect on 1 July 2019, and was amended in January 2020, January 2021, September 2021, January 2022, July 2022 and July 2023. The VDO determines the rates for standard metering types (single rate, controlled load and two-rate) in each network area and the retailers are obliged to reflect these rates if they offer non-standard standing offers.³

All retailers are required to offer a DMO/VDO but they can, and still do, offer other market contracts.

As the Tariff-Tracking project aims to monitor and assess changes to energy prices over time, the analysis presented in this report will be based on the same consumption levels (6,000 kWh and 30,000 MJ per annum) as in previous national comparison reports produced by the Tariff-Tracking project. The DMO, on the other hand, is set for households using between 3,900

¹ AER, Default Market Offer Prices 2019-20, Final Determination, April 2019, 9

² Ibid., 9

³ See ESC, Victorian Default Offer Price Determination 2022-23, 1 July 2022 – 30 June 2023, 5

and 4,900 kWh/annum in NSW (depending on network area), 4,600 kWh/annum in South East Queensland and 4,000 kWh/annum in South Australia.⁴ This means that the bills produced by the DMOs offered by retailers will vary for households using 6,000 kWh/annum as the retail offers have different supply charges and/or usage charges.

To date we have developed five workbooks for each of the National Electricity Market (NEM) jurisdictions.⁵ The workbooks allow the user to enter consumption levels and analyse household bills for standing or regulated gas and electricity offers, as well as published electricity and gas market offers.⁶ The workbooks, as well as associated reports, can be accessed at the St Vincent de Paul Society's website: www.vinnies.org.au/energy

This report is the result of a comparison of the state by state - based analyses undertaken as part of the Tariff-Tracking project, as well as reflections on the public debate on energy market developments and price fluctuations over the last year.

4 For households with single rate metering.

5 As Tasmania does not have regulated/standing offers for gas and there is only one market offer available, there are currently three workbooks for this jurisdiction.

6 The Victorian workbooks contain regulated/standing offers from July 2008 to July 2022 and market offers from July 2010 to July 2023. The NSW workbooks contain regulated/standing offers from July 2009 to July 2022 and market offers from 2011 and 2023. The Queensland and South Australian workbooks contain regulated/standing offers from July 2009 to July 2023 and market offers from July 2012 to July 2023. The ACT workbooks contain regulated/standing offers from July 2009 to July 2023 and market offers from July 2013 to July 2023. The Tasmanian workbooks contain regulated and market electricity offers from July 2009 to July 2023 and gas market offers from July 2013 to July 2023. From 2016, we have also developed workbooks containing solar offers available to new customers in all of the jurisdictions.

Overview

This report is comprised of six sections.

Section 1 **‘How energy prices are tracking’** analyses changes to electricity and gas prices across Australia from July 2009 to July 2023 in order to explore where and when prices have increased or decreased.

The base rates for both electricity and gas (standing offers) have increased in all states and territories compared to last year. Victoria has had the greatest increases (28% for electricity and 22% for gas) while Western Australia has had the lowest increases.

Section 2 **‘The electricity bill-stack’** focuses on the various cost components of electricity bills (the bill-stack) by exploring the cost of each component for each jurisdiction.

For electricity market offers (including pay on time discounts), we estimate that the retail component is negative in the ACT and as high as 15% in South East Queensland.⁷ In Victoria the retail component is between 3-6% (depending on network area), in South Australia it is 8% and in NSW it is 8-13% (depending on network area).

Section 3 **‘Additional costs of policies and programs’** examines the additional costs of ‘green schemes’ such as the Victorian Energy Upgrades and solar Feed-in Tariffs (social cost of carbon) in Victoria, South Australia’s Retailer Energy Productivity Scheme and the ACT’s FIT for small and medium scale solar.

It shows that Victorians have the highest ‘green scheme’ costs at \$188 for households using 6,000kWh per annum while customers in Queensland currently have the lowest (around \$90 per annum). We continue to be concerned about the equity of these charges and argue that a debate around how governments pass on the cost of ‘green schemes’ is warranted.

Section 4 **‘Solar offers’** compares solar offers available to new customers across the NEM as well as examining the various bill components of solar bills.

Annual bills for solar customers have increased in all jurisdictions except the ACT. Since last year, annual bills for solar customers have increased the most in Victoria’s Ausnet network (\$290) while they have decreased by \$215 in the ACT. The difference between solar and non-solar bills has decreased in many networks in recent years but in July 2023 it increased. The average FIT credit paid to households has increased in all jurisdictions except Victoria, where it remained unchanged.

Section 5 **‘Price dispersion’** analyses monthly changes to the “big three” retailers’ (AGL, Energy Australia and Origin) electricity market offers and maximum price dispersion from July 2018 to July 2023 in NSW, Queensland, South Australia and Victoria.⁸

⁷ A negative residual amount in the ACT does not mean that the retailers do not have costs or a margin in this jurisdiction and we emphasise that this is based on average retail bill across all retailers (not weighted for market share). It can, however, indicate that the retail costs/margins are lower in the ACT compared to other jurisdictions.

⁸ In NSW the comparison is based on offers in the Ausgrid network and in Victoria it is based on offers available in Citipower’s network.

The difference between the “big three” retailers’ offers (price dispersion) is much lower than the overall price-spread based on all retailer’s offers. As of July 2023, the maximum price-spread (difference to annual bill) for the “big three” is approximately \$75 in Victoria, \$90 in South East Queensland, \$125 in NSW and \$175 in South Australia. We believe the lack of price dispersion among the “big three” is a concern for effective competition in the electricity retail market.

Section 6 **‘Enabling product innovation’** discusses recent product offerings as well as a future where two-way pricing will be introduced as well as other potential retail services. We argue that there appears to be a mismatch between what we allow, encourage, or even hope, that the retailers will do in terms of innovating and ‘packaging-up’ new products, and what we enable them to do in order to comply with meaningful comparison services. In our view, the aim of the comparison sites needs to balance the need for clear and accurate information to consumers, with useability and product innovation.

1. How energy prices are tracking

Key findings:

- | The base rates for electricity (standing offers) have increased in all states and territories compared to last year.⁹
- | In Victoria electricity prices have increased by approximately 28%, in South Australia by 22%, in NSW and Queensland by 20%, in Tasmania by 10%, in the ACT by 4% and in Western Australia and in the Northern Territory by 3%.
- | From a longer-term perspective, compared to 2009 electricity prices have increased by 87% on average, with South Australia having experienced the greatest increase (117%).¹⁰
- | Gas prices have also increased in all jurisdictions with Victoria experiencing the largest increase (around 22%) since last year. Western Australia has had the lowest increase of 7%.¹¹
- | From a longer-term perspective, compared to 2009 gas prices have increased by 106% on average, with Victoria experiencing the greatest increases (169%).¹²

This section analyses changes to electricity and gas prices across Australia from July 2009 to July 2022 in order to explore where and when prices have increased or decreased.

9 Based on July 2022 and 2023 prices in all jurisdictions.

10 These are nominal price increases.

11 Based on July 2022 and 2023 prices in all jurisdictions. Northern Territory is not included in the gas analysis due to low penetration.

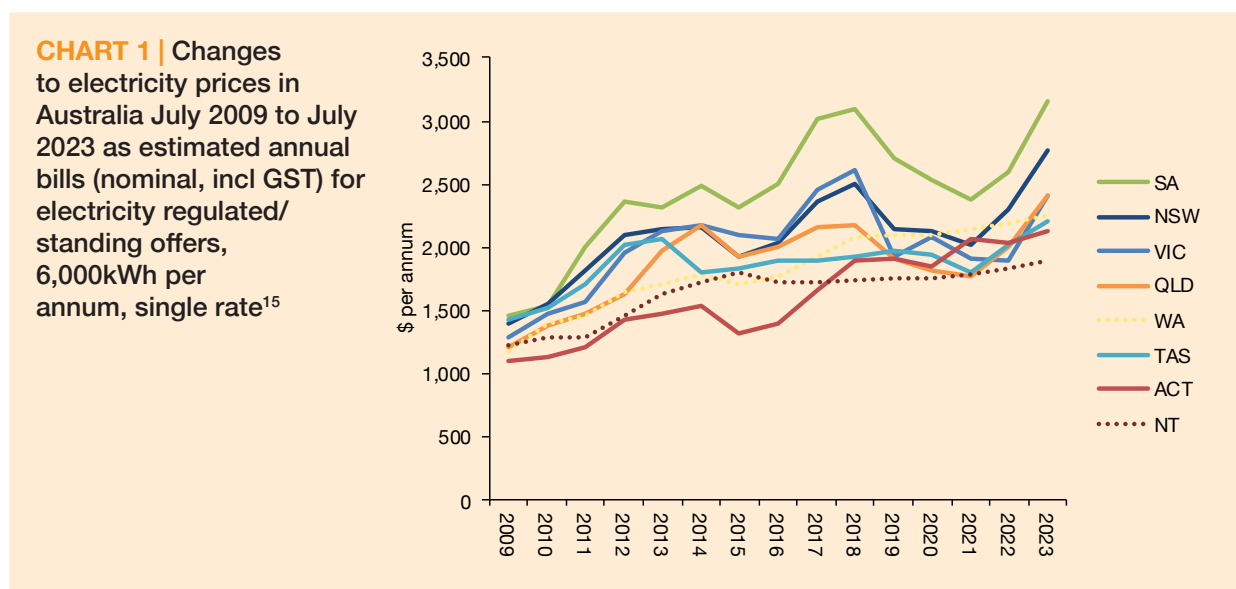
12 For Tasmania, the comparison is based on 2023 and 2013 prices. All other jurisdictions are based on prices as of 2009 and 2023. These are nominal price increases.

1.1 Electricity prices

In comparison to July 2022, regulated standing offer prices (the base-rate) have increased in all jurisdictions. The size of the increase, however, does vary significantly. **In Victoria electricity prices have increased by approximately 28%, in South Australia by 22%, in NSW and South East Queensland by around 20%, in Tasmania by 10%, in the ACT by 4% and in Western Australia and the Northern Territory by around 3%.¹³**

Chart 1 shows estimated annual bills for households consuming 6,000kWh per annum (single rate) from July 2009 to July 2023.¹⁴ The dotted lines represent electricity bills in the Northern Territory and Western Australia, the two non-NEM jurisdictions.

Looking at longer-term changes, chart 1 also shows the increasing differences in electricity prices among NEM jurisdictions between 2009 and 2023. While South Australia had the highest prices in both July 2009 and July 2023, the ACT had the lowest (in the NEM) in 2009 and in July 2023. **The difference between the annual bill for South Australian and ACT households (with this consumption level) was just \$350 in 2009 compared to approximately \$1,045 in 2023.**



¹³ Note that the Energy Bill Relief Fund means that eligible households would have received assistance from the Federal and jurisdictional governments to deal with these price increases. For details see: <https://www.energy.gov.au/government-priorities/energy-programs/energy-bill-relief-fund/energy-bill-relief-households>

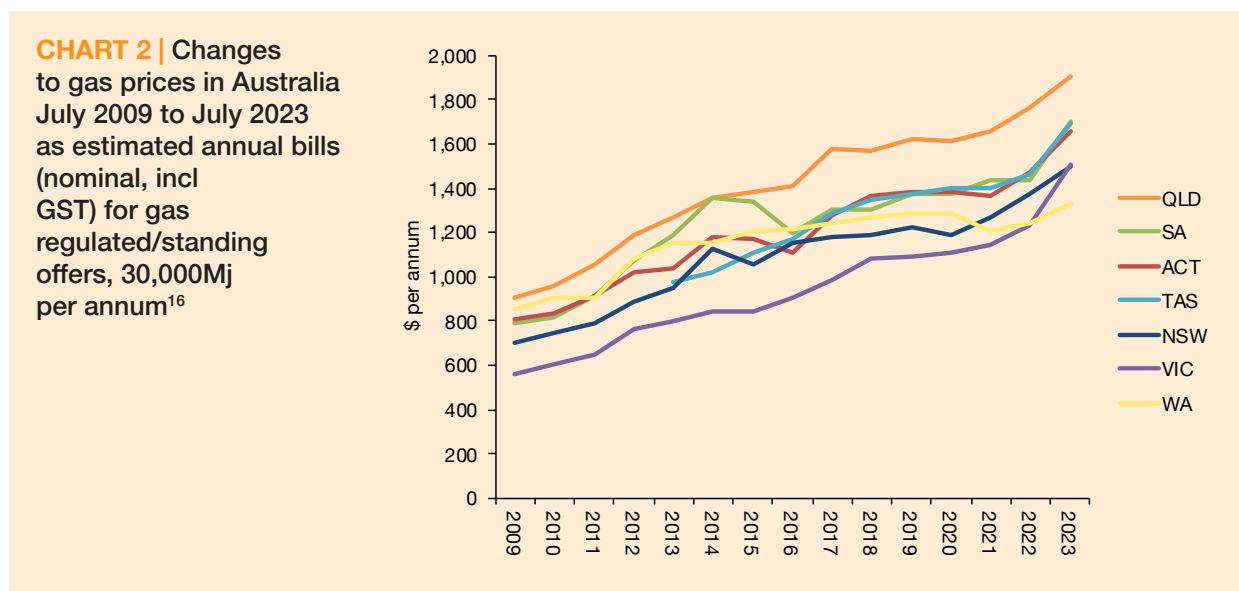
¹⁴ Note that Tasmania introduced carbon exclusive prices from 1 July 2014 (rather than backdating new prices after the repeal) and Tasmania's July 2014 price is therefore carbon exclusive.

¹⁵ As the prices differ between network areas in NSW and Victoria, the estimated bills in these two states are based on the average across network areas. In NSW, the price is based on the DMO since July 2019 and average standing offer prior to that. In Victoria, the price is based on the VDO since July 2019 and average standing offer prior to that. In South Australia, the price is based on the DMO since July 2019, average retail standing offer from July 2015 to July 2018, and AGL's regulated/standing offer prior to that. In Queensland, the price is based on the DMO since July 2019, the average retail standing offer (Energex network) from July 2016 to 2018, and the regulated/standing offer prior to that. The regulated rate has been used for ACT, Tasmania, Western Australia and the Northern Territory. Note that the transitional tariffs previously available in SA and NSW are not included in this chart.

1.2 Gas prices

Typical household gas consumption varies significantly between jurisdictions. In Victoria, for example, typical household consumption is over 60,000MJ per annum. In Queensland, on the other hand, household consumption is typically less than 10,000MJ per annum. Chart 2 below compares annual gas bills across Australia (except the Northern Territory) from July 2009 to July 2023 for households consuming 30,000MJ per annum. It shows that gas prices are greatest in Queensland and lowest in Western Australia. However, if we assume a more representative consumption level for each jurisdiction, Victorians will have greater gas bills than Queenslanders. **Gas prices have increased in all jurisdictions since July 2022 with the increases being greatest in Victoria (22%) and in South Australia (18%).**

Chart 2 also shows that the price difference between the jurisdictions has not increased by much since 2009. Unlike in the case of electricity, the difference between the jurisdiction with the highest annual bill (Queensland) and the jurisdiction with the lowest (Victoria) was \$350 in 2009 while the difference between the highest (Queensland) and the lowest (Western Australia) is currently around \$570 for this consumption level.



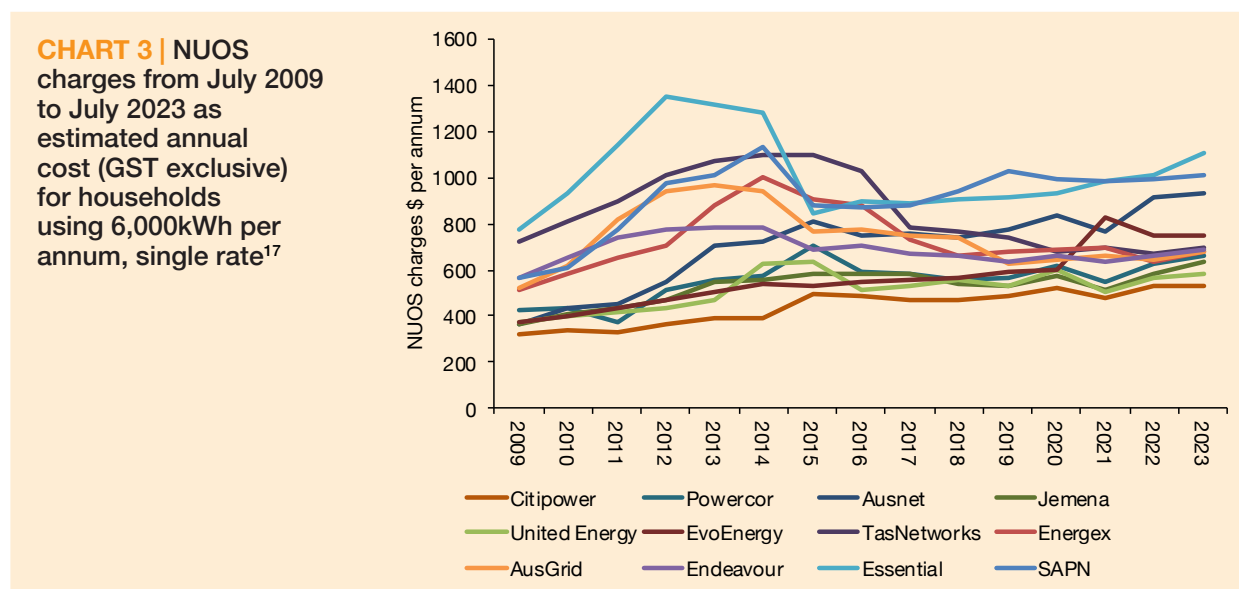
¹⁶ In Victoria the standing offer price is based on the incumbents' average retail standing offer across the eight main gas zones. In NSW the standing offer price is based on the regulated retail offer across the eleven gas zones until July 2016. In July 2019, 2020, 2021, 2022 and 2023, it is based on the incumbent retailer's standing offer in each gas zone. In Queensland it is based on the average AGL and Origin standard retail gas offers in the North Brisbane and South Brisbane gas zones. In South Australia it is based on Origin's regulated/standing offers across five gas zones. In the ACT it is based on ActewAGL's standard gas offer. In Tasmania (data from 2013 to 2023 only) it is based on Aurora and Tas Gas' average standard offer. In Western Australia it is based on the government's price cap for customers in the southwest region.

2. The electricity bill-stack

Electricity bills are made up of several components, including generation (wholesale market) costs, network costs (distribution and transmission), ‘green schemes’ and costs associated with other public policy initiatives, and retail costs. As retail prices were deregulated in Victoria, South Australia, NSW and Queensland until July 2019, effective competition was required to ensure that households did not pay more than necessary for both generation (wholesale) and retail services (including retail margins). With the re-regulation of retail markets in July 2019, however, the regulatory decisions impact on the bill-stack for standing offer (DMO and VDO) while the market offers still reflect the competitive pressures. This section therefore seeks to explore the cost of each component for each jurisdiction, as well as differences between the types of offers/contracts.

Chart 3 below shows that in 2023, **Network Use of System (NUOS) charges increased slightly in most network areas. The greatest increase being in NSW’s Essential Energy network.**

Chart 3 also shows that the NUOS price changes vary significantly between the networks. Households in rural NSW (Essential) and South Australia (SAPN) pay the highest NUOS charges in the NEM. The NUOS charges are lowest in Victoria’s metropolitan Citipower network. The difference between NUOS costs in the various networks has decreased since last year. Currently an annual “NUOS bill” for this consumption level is \$575 more in the Essential network compared to Citipower. By contrast, the difference was as high as \$985 in 2012.



¹⁷ The annual NUOS charges have been calculated by allocating 1,500kWh per quarter (again based on annual consumption of 6,000kWh) to the step charges stipulated in the NUOS. The annual NUOS cost also includes fixed charges.

Chart 4 below looks at NUOS charges as a proportion of total bill. It shows that the NUOS proportion of electricity bills is now highest (36%) in NSW's Essential network and the ACT's EvoEnergy network (35%). By comparison, the NUOS accounts for closer to 25% of electricity bills in Victoria's Citipower and United Energy networks and NSW's AusGrid and Endeavour networks. Since last year, the NUOS proportion has decreased in all networks.

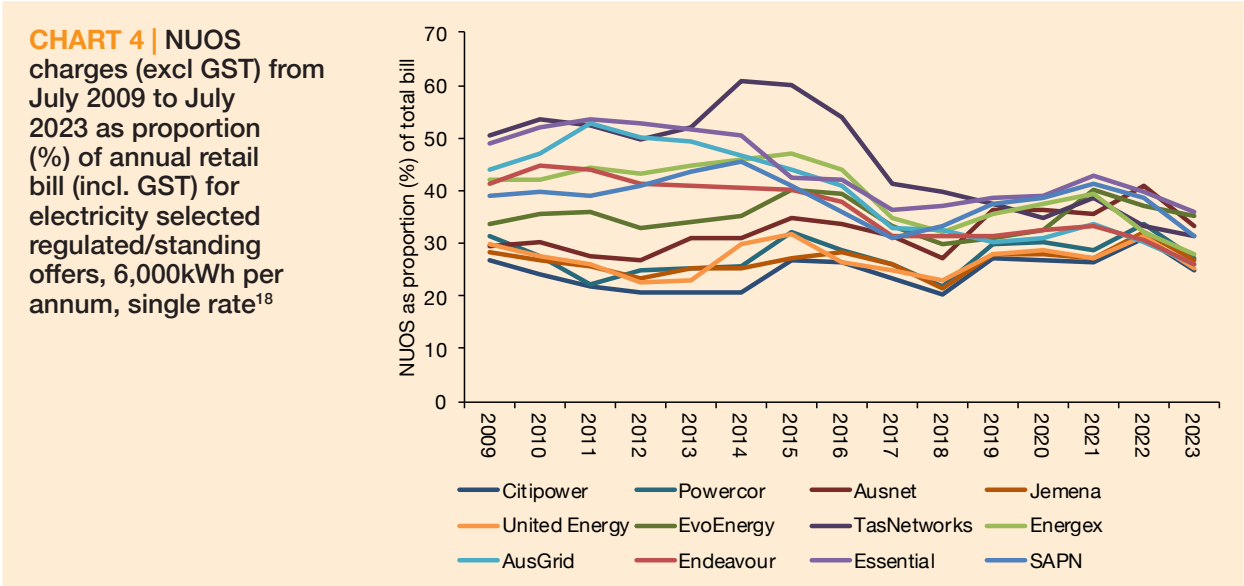
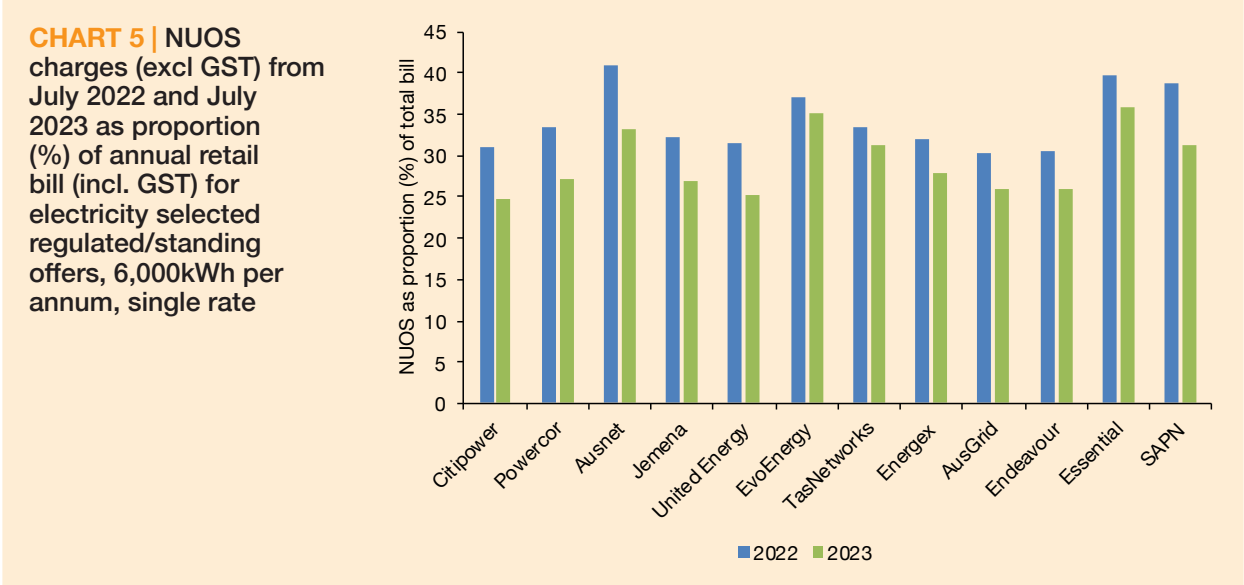


Chart 5 compares the NUOS proportion of bills in July 2022 to July 2023. It shows that the biggest decreases occurred in Victoria's Ausnet network and South Australia's SAPN network. In the ACT (EvoEnergy) and Tasmania (Tasnetworks) the decreases have been more modest.



In order to examine what households actually pay for the various goods, services and policies that are costed by the supply chain and passed on to consumers in a retail bill, we deduct estimated cost components from the average annual retail bill for households using 6,000kWh per annum post July 2023.

¹⁸ In Victoria the standing offer bill is based on the average incumbent (AGL, Origin and Energy Australia) standing offer as of July every year and the VDO since July 2019. In NSW the retail bill is based on the regulated rate from 2009 to 2013 and the incumbent retailer's standing offer in each of the network areas (Origin or Energy Australia) since July 2014. In South Australia the retail bills are based on the regulated rates as well as AGL's standing offer post retail deregulation. In Queensland the retail bills are based on the regulated rates as well as AGL and Origin's average standing offer post retail deregulation (July 2016). In all other jurisdictions the retail bills are based on the regulated rates.

While we do not know exactly what retailers pay for wholesale energy, we have used the wholesale costs figures that the AER (NSW, Queensland and South Australia), ESC (Victoria) and ICRC (ACT) used in order to determine the DMO, VDO and regulated rates for 2023/24.¹⁹ Table 1 below shows the regulators’ estimated wholesale costs for 2023/24.

TABLE 1 | Estimated electricity wholesale costs (\$/MWh)

Jurisdiction	Network	Wholesale cost \$/MWh
NSW	Ausgrid	186
NSW	Endeavour	190
NSW	Essential	178
QLD	Energex	167
SA	SAPN	226
VIC	Citipower	136
VIC	Powercor	153
VIC	Ausnet	155
VIC	Jemena	152
VIC	United Energy	150
ACT	EvoEnergy	160

The same regulators’ data has also been used to estimate ‘green scheme’ costs.²⁰ It should be noted that the Victorian ‘green scheme’ costs are based on the Large-scale Renewable Energy Target (LRET) and Small-scale Renewable Energy Scheme (SRES) only and do not include the cost of Feed-in Tariffs (social cost of carbon) or the cost of the Victorian Energy Upgrades scheme.²¹ In the ACT, the ‘green scheme’ costs are based on the national ‘green scheme’ costs as reported by the ICRC.²² Table 2 below shows the regulators’ estimated environmental costs for 2023/24.

¹⁹ AER, Default market offer prices 2023-24, Final determination, May 2023, Table 5.1, ESC, Victorian Default Offer 2023-24, Final Decision Paper, May 2023, Table D.1 and ICRC, Price Recalibration, Retail electricity price recalibration 2023-24: standing offer prices for the supply of electricity to small customers, Report 4 of 2023, June 2023, Table 2.1. As the Office of the Economic Regulator in Tasmania uses a different format to report on the costs associated with the regulated rates, Tasmania has not been included in this analysis.

²⁰ AER, Default market offer prices 2023-24, Final determination, May 2023, Table 5.2, ESC, Victorian Default Offer 2023-24, Final Decision Paper, May 2023, Table D.8 and ICRC, Price Recalibration, Retail electricity price recalibration 2023-24: standing offer prices for the supply of electricity to small customers, Report 4 of 2023, June 2023, Table 2.1.

²¹ Section 3 below analyses the various ‘green scheme’ costs in more detail.

²² We have also been advised that the NUOS includes some ‘green scheme’ costs in the ACT.

TABLE 2 | Estimated 'green scheme' costs (\$/MWh)

Jurisdiction	Network	'Green scheme' cost \$/MWh
NSW	Ausgrid	19
NSW	Endeavour	19
NSW	Essential	18
QLD	Energex	15
SA	SAPN	19
VIC	Citipower	17
VIC	Powercor	17
VIC	Ausnet	17
VIC	Jemena	17
VIC	United Energy	17
ACT	EvoEnergy	15

While we believe these figures provide a good indication of wholesale and 'green scheme' costs in the various jurisdictions, we note that differences in methodologies used as well as differences in policy objectives and purposes of the DMO, VDO or regulated rates can impact on where and how costs have been allocated in the various jurisdictions.

In order to examine what households pay for the various services (and policies) that are costed by the supply chain and passed on to consumers in the form of a retail bill, tables 3 and 4 below estimate the retail component of bills for standing offer customers and market offer customers. Both tables are based on households consuming 6,000 kWh per annum at a single rate tariff.

By deducting GST, NUOS costs, wholesale costs and the cost of environmental policies ('green schemes'), the residual retail component of a residential *standing offer* bill (final column) is as low as \$135 (in the ACT's EvoEnergy network) and as high as \$590 (in Victoria's Powercor network).²³

²³ Note that other charges such as separate metering costs, market fees and ancillary service fees as well as losses have not been accounted for in this bill-stack. As the Office of the Economic Regulator in Tasmania uses a different format to report on the costs associated with the regulated rates, Tasmania has not been included in this analysis.

TABLE 3 | Deduction of bill components for regulated/standing offers, average annual bill based on offers taking effect post July 2023 (6,000kWh per annum, single rate)²⁴

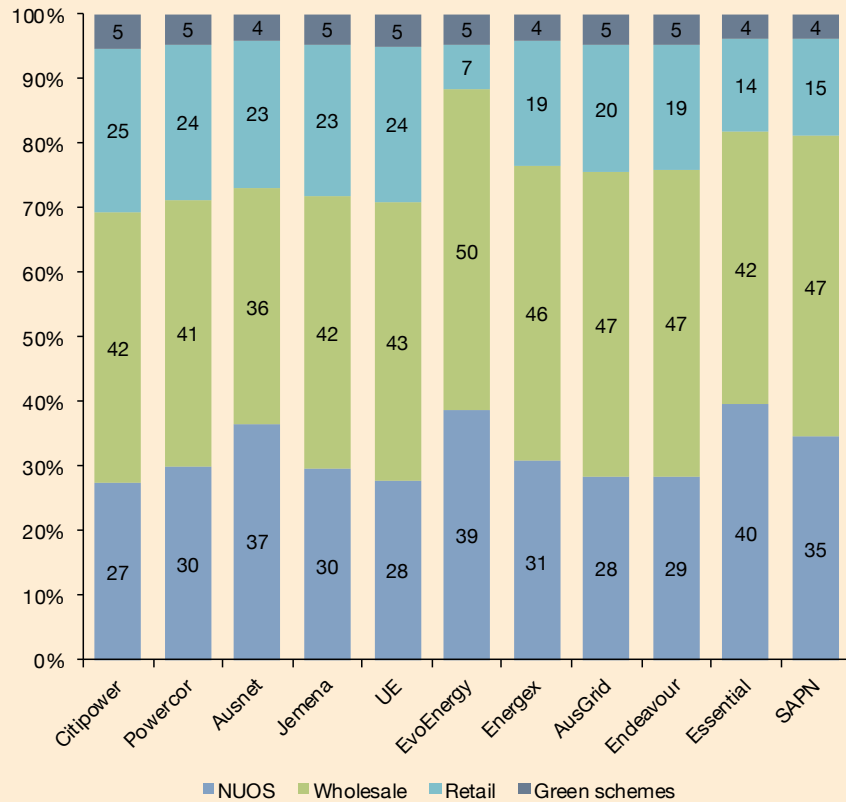
Network	Retail bill incl. GST [^]	Retail bill excl. GST	Retail bill excl. GST and NUOS [*]	Retail bill excl. GST, NUOS and whole-sale ^{^^}	Retail bill excl. GST, NUOS, wholesale and “green scheme” costs ^{**}
Citipower	2,142	1,947	1,415	597	494
Powercor	2,448	2,225	1,560	642	538
Ausnet	2,813	2,557	1,622	691	588
Jemena	2,368	2,153	1,518	604	501
UE	2,298	2,089	1,509	610	507
EvoEnergy	2,121	1,928	1,183	226	135
Energex	2,411	2,191	1,517	515	423
Ausgrid	2,614	2,376	1,700	584	472
Endeavour	2,644	2,404	1,718	581	468
Essential	3,085	2,805	1,696	508	397
SAPN	3,207	2,915	1,908	552	436
[^] As per chart 4 above	[*] As per chart 3 above	^{^^} As per table 1 above	^{**} As per table 2 above		

Chart 6 below is based on the same calculations presented in table 3 above but shows the various bill components as a percentage of the total bill. **Our estimates show that between 7-25% of the bills paid by households goes to the retailer, which is a narrower spread compared to last year when it was 3-34%.²⁵** The wholesale component of the bill is now the greatest bill component in all network areas except for in Victoria’s Ausnet network where the NUOS component is slightly greater.

²⁴ This table is based on the same offers used for July 2023 in chart 4 above. Note that the ‘green scheme’ component is only based on LRET and SRES in Victoria and national ‘green scheme’ costs in the ACT. See section 3 for more detailed analysis.

²⁵ Cost of retail includes both retail costs and margins (profits) and we stress that some of the cost components are based on estimates rather than actual known costs.

CHART 6 | Estimated bill-stack for selected regulated/standing offers, average annual bill based on the offers taking effect post July 2023 (6,000kWh per annum, single rate, excluding GST)²⁶



As the calculations for the chart above are based on standing and/or regulated prices, a bill-stack analysis for market offers is included below.²⁷ A longstanding feature of market offers in the NEM retail markets has been to offer a discount on the published rates. After the introduction of the DMO/VDO, however, the number of offers with additional discounts, and especially conditional pay on time discounts, has reduced significantly. Instead, many retailers now apply different base rates to their market offers.

Table 4 below deducts estimated cost components from the annual retail market offer bill (including pay on time discounts) for households using 6,000kWh per annum post July 2023. After deducting GST, NUOS costs, wholesale costs, the cost of environmental policies ('green schemes'), amounts in the final column are negative in the ACT (EvoEnergy) and as high as \$315 in South East Queensland (Energex).²⁸ This may indicate that the retail costs/margins are lower for market offer customers in the ACT compared to other jurisdictions. By comparing these figures to the regulated/standing offers examined in table 3 above, we can see that **the retail component of bills is significantly lower for market offers compared to regulated/standing offers.**

²⁶ This chart is based on the calculation used for table 3 above. Note that the 'green scheme' component is only based on LRET and SRES in Victoria and national 'green scheme' costs in the ACT. See section 3 for more detailed analysis.

²⁷ Note that the market offer bill-stack as it is based on the average market offer (unweighted) across all retailers.

²⁸ A negative residual amount in the ACT does not mean that the retailers do not have costs or a margin in this jurisdiction and we emphasise that this is based on average retail bill across all retailers (not weighted for market share). It can, however, indicate that the retail costs/margins are lower in the ACT compared to other jurisdictions. We have also been advised that the NUOS includes some 'green scheme' costs in the ACT. Note that other charges such as market fees and ancillary service fees as well as losses have not been accounted for in this bill-stack.

TABLE 4 | Deduction of bill components for selected market offers (including pay on time discounts), average annual bill based on offers taking effect post July 2022 (6,000kWh per annum, single rate)

Network	Retail bill incl. GST [^]	Retail bill excl. GST	Retail bill excl. GST and NUOS	Retail bill excl. GST, NUOS and whole-sale*	Retail bill excl. GST, NUOS, wholesale and "green scheme"
Citipower	1,700	1,545	1,013	195	91
Powercor	1,943	1,766	1,100	183	79
Ausnet	2,232	2,029	1,093	163	59
Jemena	1,878	1,708	1,072	159	55
UE	1,823	1,657	1,077	178	75
EvoEnergy	1,641	1,492	747	-211	-301
Energex	2,291	2,082	1,408	405	314
Ausgrid	2,353	2,139	1,463	346	234
Endeavour	2,458	2,235	1,549	412	299
Essential	2,869	2,608	1,500	312	201
SAPN	2,977	2,706	1,699	342	226

[^] Based on market offers available post July 2023 (including guaranteed and pay on time discounts) offered by the same retailers included in the analysis of standing/regulated offers (table 3)

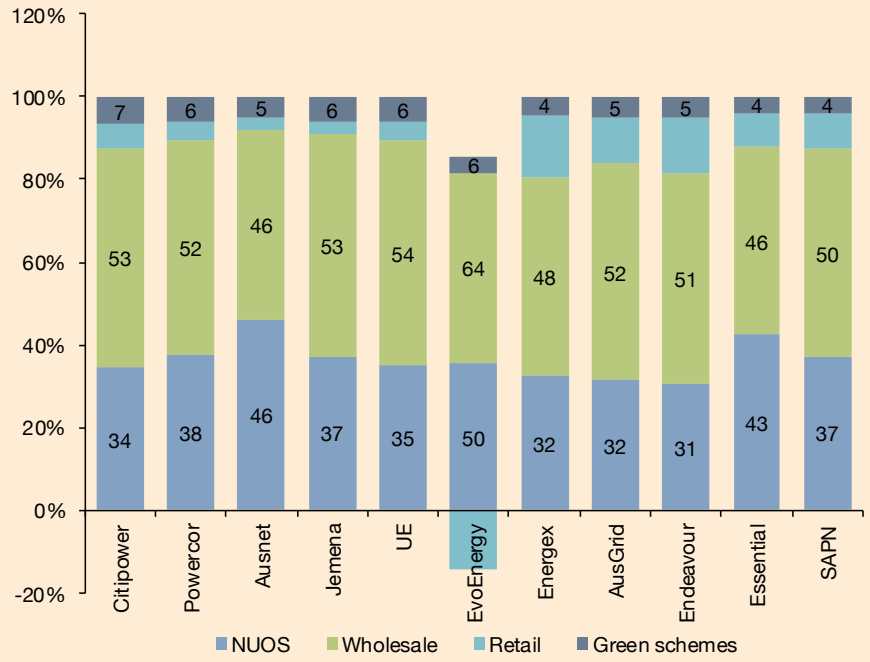
*As per table 1 above.

**As per table 2 above

Chart 7 below is based on the same calculations presented in table 4 above but shows the various bill components as a percentage of the total bill. Chart 7 shows that the retail proportion of bills is smaller for market offers compared to standing/regulated offers in all jurisdictions (chart 6 compared to chart 7). Again, we note that some of the cost components are based on estimates rather than actual, known costs.²⁹

²⁹ Cost of retail includes both retail costs and margins (profits). A negative residual amount in the ACT does not mean that the retailers do not have costs or a margin in this jurisdiction and we emphasise that this is based on average retail bill across all retailers (not weighted for market share). It can, however, indicate that the retail costs/margins are lower in the ACT compared to other jurisdictions.

CHART 7 | Estimated bill-stack for market offers, average annual bill based on the offers taking effect post July 2023 (6,000kWh per annum, single rate, excluding GST)³⁰



³⁰ This chart is based on the calculation used for table 4 above

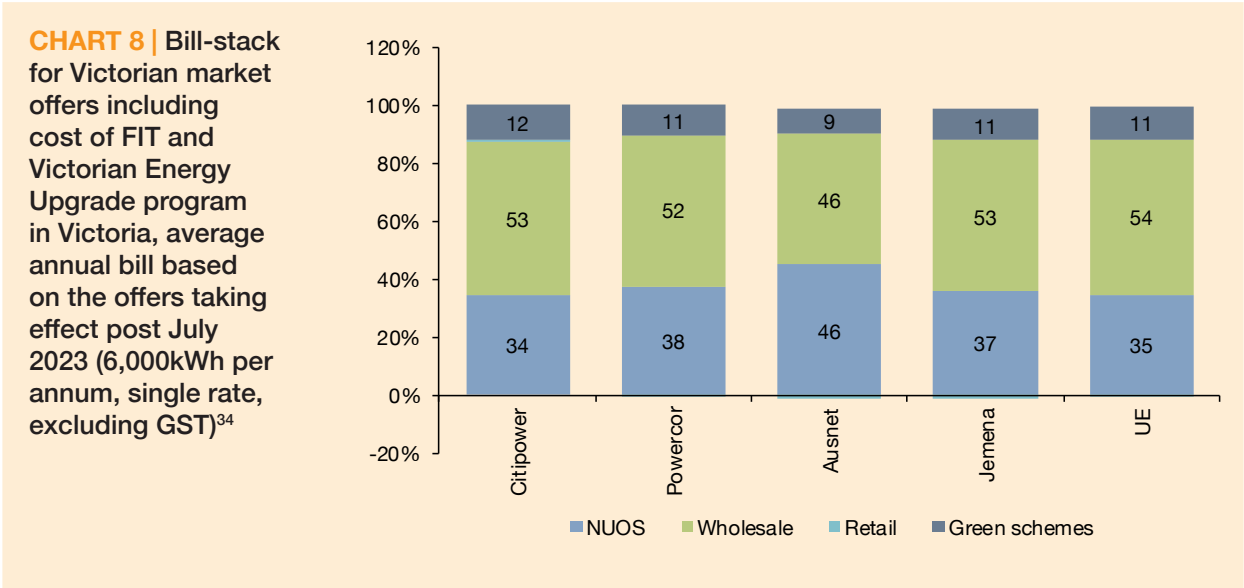
3. Additional costs of policies and programs

It can be difficult to determine and compare additional costs as the various jurisdictions and regulators may allocate similar costs to different bill components. There are, however, some additional costs that we believe warrant attention.

For Victoria, the ‘green scheme’ costs included in section 2 above were the Large-scale Renewable Energy Target at \$10.40/MWh and the Small-scale Renewable Energy Scheme at \$6.86/MWh. However, Victorians also pay for the Victorian Energy Upgrades scheme at \$11.18/MWh and solar Feed-in Tariffs (social cost of carbon) at \$16.95/customer. As such, the Victorian Energy Upgrades (VEU) program is estimated to cost Victorian consumers more than the Large-scale Renewable Energy Target (LRET). The aim of the VEU is to help Victorians reduce energy costs and greenhouse gas emissions through energy efficiency products and services.³¹ It also “encourages investment, employment and innovation in industries that supply these products and services”.³² The VEU program is aligned with the Victorian Government’s Climate Change target timelines and will run until 2030. The program covers several relatively inexpensive activities such as weather sealing, the installation of efficient shower roses as well as in-home display units that allow consumers to monitor their energy usage. Other, more capital-intensive activities include changing/installing major appliances with high energy efficiency ratings and double-glazing windows.

As of November 2023, there are 53 companies offering low flow shower roses, 52 active companies offering in-home displays, 49 companies offering weather sealing, 30 companies offering high efficiency air conditioners (for heating and cooling), 9 companies offering services in relation to purchasing high efficiency refrigerators/freezers, and 2 companies offering double glazed windows.³³ Unsurprisingly, this indicates that there are more businesses participating in activities that require less capital, training and infrastructure than the other activities.

Chart 8 below shows the bill-stack when we include the cost of the FIT and the VEU in Victoria. It shows that the residual retail component is now between zero and minus 2 compared to 3 to 6% in chart 7 above. The cost of ‘green schemes’ have gone from 5-7% to 9-12%.



31 See <https://www.esc.vic.gov.au/victorian-energy-upgrades/about-victorian-energy-upgrades-program>

32 Ibid.

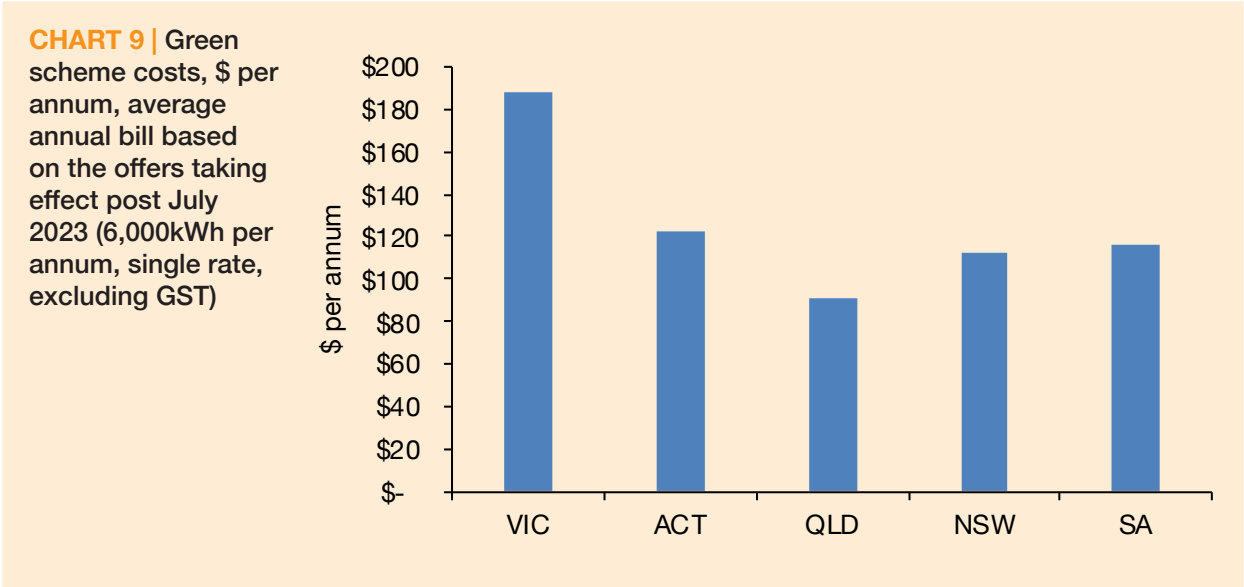
33 Based on searches on the ESC’s register on 17 November 2023. See <https://www.veu-registry.vic.gov.au/Public/Participants2.aspx>

34 This chart is based on the calculation used for table 4 above except for that it also includes the cost of FIT (cost of carbon) as well as the cost of the Victorian Energy Upgrade program.

The South Australian Government also has an energy efficiency scheme, the Retailer Energy Productivity Scheme (REPS), which aims to “improve energy productivity for households, businesses and the broader energy system, with a focus on low-income households”.³⁵ The AER allocates the costs of this scheme to the ‘green scheme’ costs when determining the South Australian DMO and for 2023/24 the cost of the scheme was set at \$3.19/MWh.³⁶

In the ACT, the regulator allocates the ACT Government’s scheme costs in the network charges. These schemes include the FIT cost for small and medium scale at \$5.38/MWh, the FIT cost for large scale at -\$23.14/MWh and other schemes’ costs at \$2.53.³⁷

Chart 9 below shows ‘green scheme’ costs for each jurisdiction based on the AER’s DMO calculations for NSW, South Australia and Queensland, and the LRET, SRES, VEU and FIT for Victoria, and the LRET, SRES and small scale FIT for the ACT. It shows that Victorians have the highest ‘green scheme’ costs at \$188 per annum for households using 6,000kWh per annum while customers in Queensland currently have the lowest (around \$90 per annum).



As the cost of electricity can incentivise consumers to moderate consumption and become more energy efficient, it may be reasonable for governments to pass on the cost of various ‘green schemes’ to electricity consumers. However, we continue to be concerned about the equity of these charges. While high consumption households will pay more for ‘green schemes’ (when the charges are linked to usage), these households also typically have more options, and incentives, to alter usage (pattern and/or total load), replace or upgrade appliances, as well as making improvements to dwellings themselves. Low consumption households, on the other hand, typically have few appliances to start with and are likely to live in smaller dwellings with limited improvement options. These households simply have to pay for the additional charges without being able to reduce their costs. At the same time, these households’ contribution to the emissions released by household energy consumption is lower.

In our view, these equity issues warrant a debate around how governments pass on the cost of ‘green schemes’. Consolidated revenue and taxation may be one option. Another option could be to only apply ‘green scheme’ costs to usage above a set threshold. We also believe this debate is needed with some urgency as the equity issues are only likely to exacerbate as more resourceful households opt for distributed energy solutions, batteries and alternative fuel sources.

³⁵ See ESCOSA, Retailer Energy Productivity Scheme, Annual Report, 2021, 1
³⁶ This cost is included in the bill stack analysis in section 2.
³⁷ This is the first year the LFiT has been negative and therefore resulted in a reduced network cost for customers in the ACT.

4. Solar offers

This year is the eighth year the Tariff-Tracking project includes offers available to solar customers and compared offers based on both electricity bought and feed-in-tariff (FIT) rates for electricity sold. The online workbooks allow users to compare offers for 3 kW and 1.5 kW capacity systems, based on nominated consumption levels and location (network and urban or non-urban setting).³⁸ The analysis presented below is based on 3 kW systems in urban locations and the assumptions applied are shown in table 5.

Key findings include:

- | Annual bills for solar customers have increased in all jurisdictions except the ACT.
- | Since last year, annual bills for solar customers have increased the most in Victoria's Ausnet network (up \$290) while they have decreased in the ACT (down \$215).
- | The difference between solar and non-solar bills has increased in all network areas.
- | The average FIT credit paid to households has increased in all jurisdictions except Victoria.

TABLE 5 | Assumptions: Generation capacity and export (%) in capital cities, 3 kW systems³⁹

Capital cities	Annual generation per kW installed	Export rates (%)
Adelaide	1.680 MWh	51.8%
Brisbane	1.736 MWh	53.4%
Melbourne	1.539 MWh	47.4%
Hobart	1.185 MWh	47.4%
Canberra	1.801 MWh	55.1%
Sydney	1.614 MWh	49.9%

Chart 10 shows average annual bills for solar customers (3 kW systems installed) in metropolitan areas using 6,000 kWh (imported as well as generated) per annum.⁴⁰

It shows that the average annual bills (calculations based on all retailers' solar market offers) are lowest in the ACT (EvoEnergy) and highest in South Australia's SAPN network.

³⁸ We note that these systems are small compared to the size of the typical systems that are currently being installed. However, as a key objective of the Tariff-Tracker is to compare developments over time, we continue to base the analysis on 3 kW and 1.5 kW systems.

³⁹ The Tasmanian 1.185 MWh generation capacity is based on small-scale technology certificates (STC) for zone 4. The Export rate is based on Melbourne assumptions and may therefore be slightly higher than the Tasmanian average. The Canberra assumptions are based on non-metropolitan NSW rates and will therefore be somewhat high for ACT housing experiencing overshadowing.

⁴⁰ Based on average market offer (all retailers) including guaranteed discounts, pay on time discounts, FIT credits and GST. NSW's Essential network is not included as it covers rural NSW only.

CHART 10 | Annual retail bills for solar customers post July 2023, inclusive of pay on time discounts and FIT credits (6,000kWh per annum, single rate, GST incl)

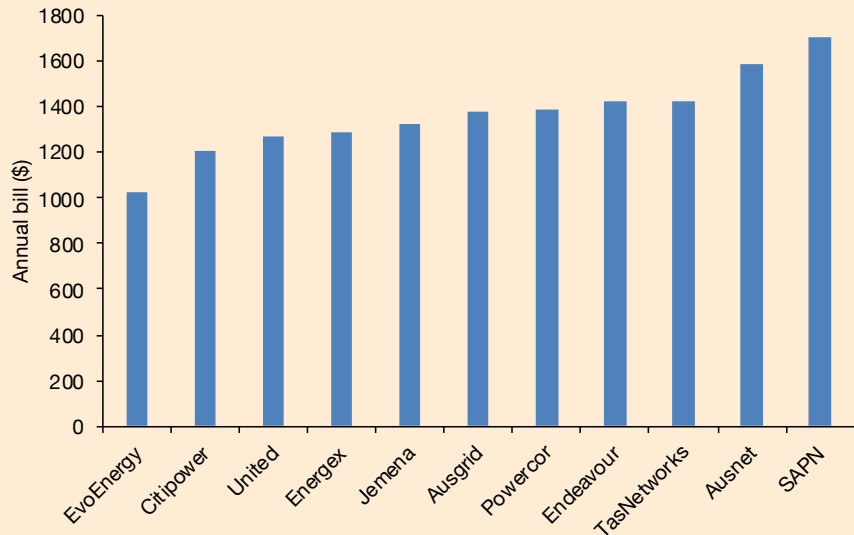


Chart 11 compares annual bills for non-solar customers and solar customers. It shows that the greatest bill difference is in South Australia (\$1,175) while the smallest difference is in Victoria's Citipower network (\$725). **The trend has been that difference between solar and non-solar bills has decreased in recent years but as of July 2023 it increased. In July 2020 the average difference was \$860, in July 2021 the average difference was \$780, in July 2022 it was \$655 and in July 2023 it is \$875.**

CHART 11 | Annual retail bills for non-solar customers and solar customers post July 2023, inclusive of pay on time discounts and FIT credits (6,000kWh per annum, single rate, GST incl)⁴¹

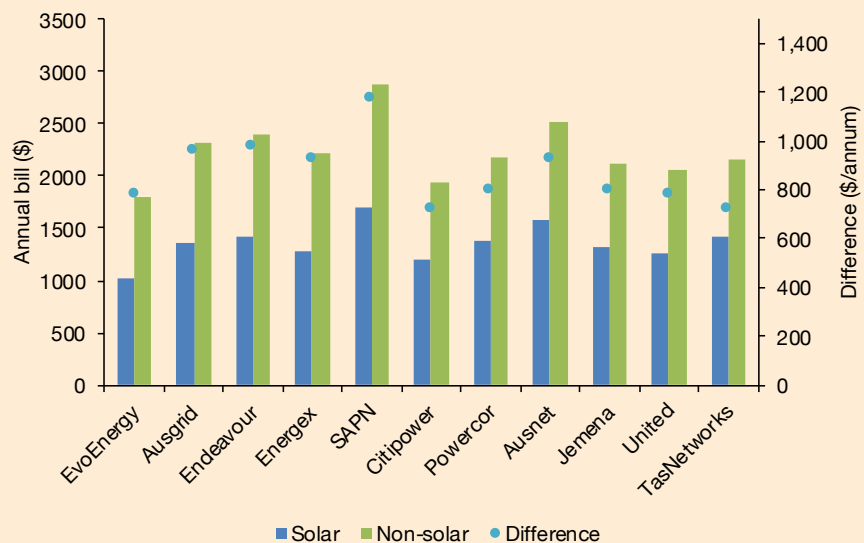
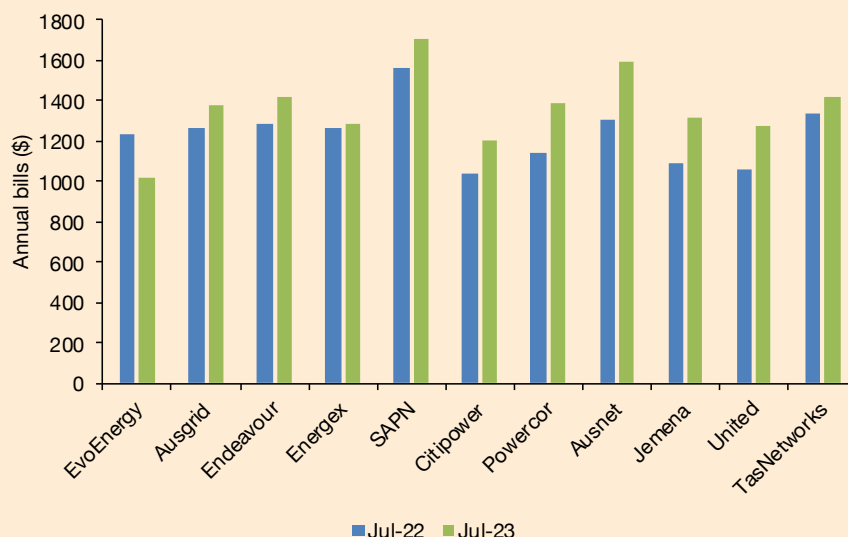


Chart 12 below compares solar bills as of July 2022 to bills post July 2023. It shows that the **annual bills for solar customers have increased in all network areas except EvoEnergy (average increase of \$130). The largest increase has been in Victoria's Ausnet network (\$290). In the ACT, on the other hand, the average bill has decreased by \$215.**

⁴¹ The average market and solar offer bills in this chart are based on all retailers with an offer in each network area. In section 2 above, on the other hand, market offers were based on selected retailers in order to compare against relevant regulated/standing offers.

CHART 12 | Annual retail bills for solar customers post July 2022 and 2023, inclusive of pay on time discounts and FIT credits (6,000kWh per annum, single rate, GST incl)⁴²



The average FIT credit paid to households has increased in all jurisdictions except Victoria, where it remained unchanged. The largest increase was in the ACT (21%). Table 6 below shows average FIT credit as of post July 2022 and post July 2023 as well as percentage change for households using 6,000 kWh/annum and with a 3 kW system installed.

TABLE 6 | Annual average FIT credit, market offers post July 2022 and July 2023, 6,000kWh per annum, 3 kW system, single rate

Jurisdiction	Average annual FIT credit (\$) post July 2022	Average annual FIT credit (\$) post July 2023	% change
South Australia	\$165	\$184	12%
ACT	\$214	\$259	21%
New South Wales	\$200	\$239	20%
Queensland	\$193	\$218	13%
Victoria	\$152	\$152	0%
Tasmania	\$156	\$183	17%

Table 7 below deducts estimated cost components from the annual retail market offer bill (including pay on time discounts) for households with 3kW systems installed and using 6,000kWh per annum post July 2023. After deducting GST, NUOS costs, wholesale costs and the cost of environmental policies (‘green schemes’), amounts in the final column are positive in all network areas except the ACT (ActewAGL) and NSW’s AusGrid network.⁴³ A comparison of the residual amount for non-solar households to solar households indicates that the retail component is higher for solar households in Victoria and vice versa in the other jurisdictions. This can be partly explained by lower wholesale prices in Victoria as well as lower FIT rates.

⁴² Based on average market offer (all retailers) including guaranteed discounts, pay on time discounts, FIT credits and GST for metropolitan customers with 3 kW systems. NSW’s Essential network is not included as it covers rural NSW only.

⁴³ A negative residual amount in the ACT and Ausgrid does not mean that the retailers do not have costs or a margin in this jurisdiction and we emphasise that this is based on average retail bill across all retailers (not weighted for market share). It can, however, indicate that the retail costs/margins are lower in the ACT and NSW’s Ausgrid network compared to other jurisdictions. Note that other charges such as separate metering fees, market fees and ancillary service fees as well as losses have not been accounted for in this bill-stack. As the Office of the Economic Regulator in Tasmania uses a different format to report on the costs associated with the regulated rates, Tasmania has not been included in this analysis.

TABLE 7 | Deduction of bill components selected solar offers (including pay on time discounts and FIT rates), annual bill based on offers taking effect post July 2023 (6,000kWh per annum, 3 kW system, single rate)⁴⁴

Network	Retail bill incl. GST [^]	Retail bill excl. GST	Retail bill excl. GST and NUOS	Retail bill excl. GST, NUOS and whole-sale*	Retail bill excl. GST, NUOS, wholesale and "green scheme" costs**
Citipower	1208	1098	745	259	197
Powercor	1412	1284	831	285	224
Ausnet	1621	1474	874	321	259
Jemena	1341	1219	803	259	198
UE	1291	1174	801	267	205
EvoEnergy	856	778	284	-286	-340
Energex	1315	1195	713	116	62
Ausgrid	1300	1182	728	63	-4
Endeavour	1393	1266	790	113	45
SAPN	1828	1662	982	174	105

[^] Based on solar offers available post July 2023 (including guaranteed and pay on time discounts) offered by the same retailers included in the analysis of standing/regulated offers (table 3) and market offers (table 4)

*As per table 1 above.

**As per table 2 above

44 Note that the cost of the smart meter rollout is not accounted for in the NUOS charges due to the AMI Cost Recovery Order-In-Council that ensures that the distributors are able to recover expenditure associated with the AMI program from consumers on a cost pass-through basis.

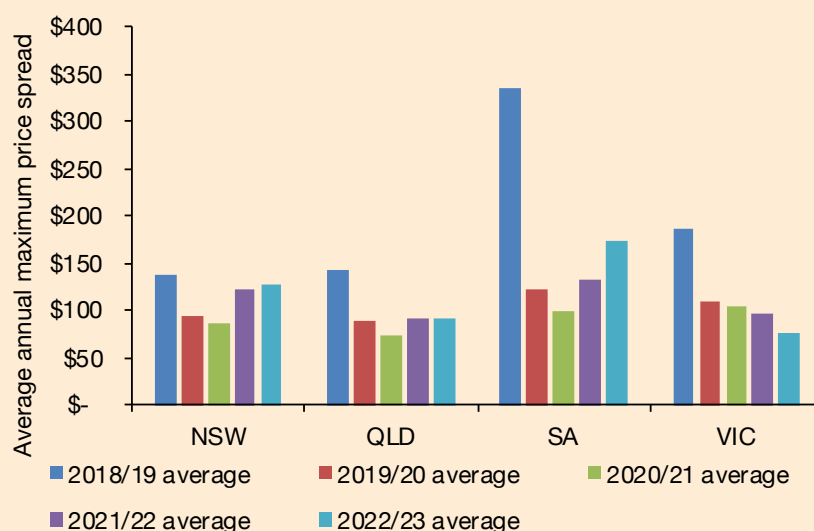
5. Price dispersion

This section analyses monthly changes to the “big three” retailers’ (AGL, Energy Australia and Origin) electricity market offers and maximum price dispersion from July 2018 to July 2023 in NSW, Queensland, South Australia and Victoria.⁴⁵

Findings include that the difference between the “big three” retailers’ offers vary throughout the year and that price dispersion initially decreased when the DMO/VDO was introduced in July 2019. The annual average maximum price-spread between the “big three” has decreased each year in Victoria since 2018/19. In NSW, Queensland and South Australia the average maximum price-spread has increased slightly over the two last years, especially in South Australia (chart 13). Furthermore, it shows that the price-spread between the big three is much lower than the market overall (chart 18).

We believe the lack of price dispersion among the “big three” is a concern for effective competition in the electricity retail market. The ‘bill-stack’ analysis in section 2 above indicates that the residual cost component of bills that goes to retailers is relatively low and would require a high volume of sales (customers). The “big three” retailers rarely have the best priced offers in the market but neither are they the most expensive. Very small retailers, however, are typically presented at each end of the spectrum. This could indicate that very small retailers use low prices to attract new customers as well as relying on significant price increases if or when the underlying costs go up. We have noted in the past how small retailers can go from having the single best offer one year to being the single most expensive the next.

CHART 13 | Average annual maximum difference between the big three’s annual retail bills from 2018/19 to 2022/23 in NSW, Queensland, South Australia and Victoria, inclusive of guaranteed and pay on time discount (6,000kWh per annum, single rate, GST incl)⁴⁶

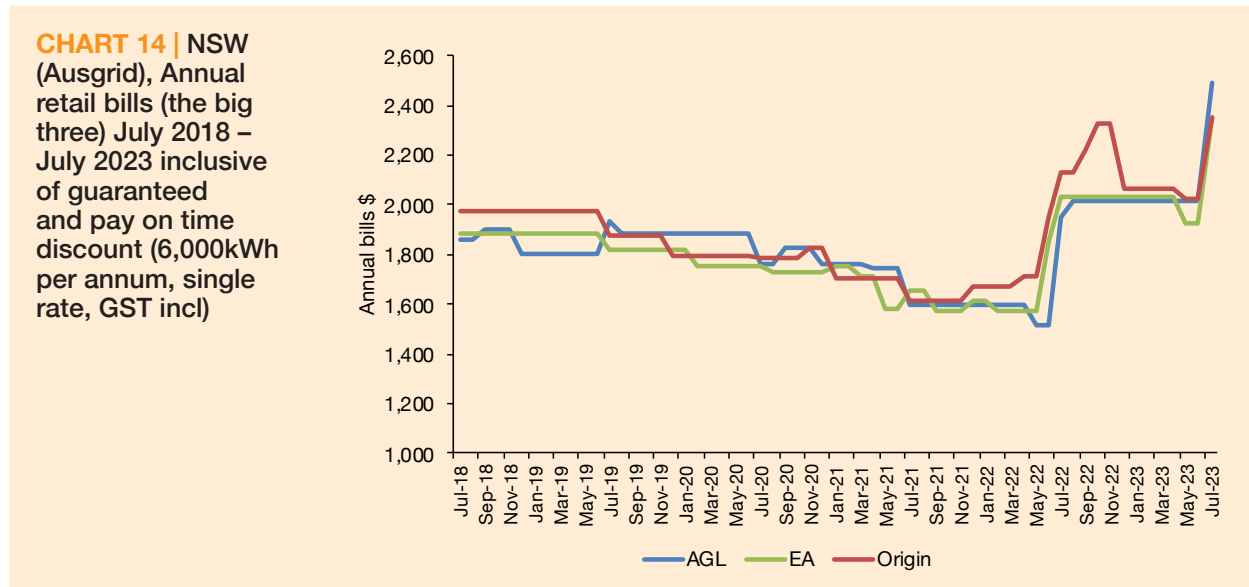


⁴⁵ In NSW the comparison is based on offers in the Ausgrid network and in Victoria it is based on offers available in Citipower’s network. As retailers change the name of offers, discontinue offers and create new offers, the offers used have varied over the five years. For Energy Australia we have used ‘Flexi Saver’, ‘Total Plan’ and ‘Flexi Plan’, for AGL we have used ‘Savers’, Smart Saver’, Essentials Plus’, ‘Essentials Saver’, ‘Super Saver’ and ‘Value Saver’ (as well as Partners Saver in Queensland), and for Origin we have used ‘Saver’, ‘Flexi’, ‘Go’ and ‘Go Variable’.

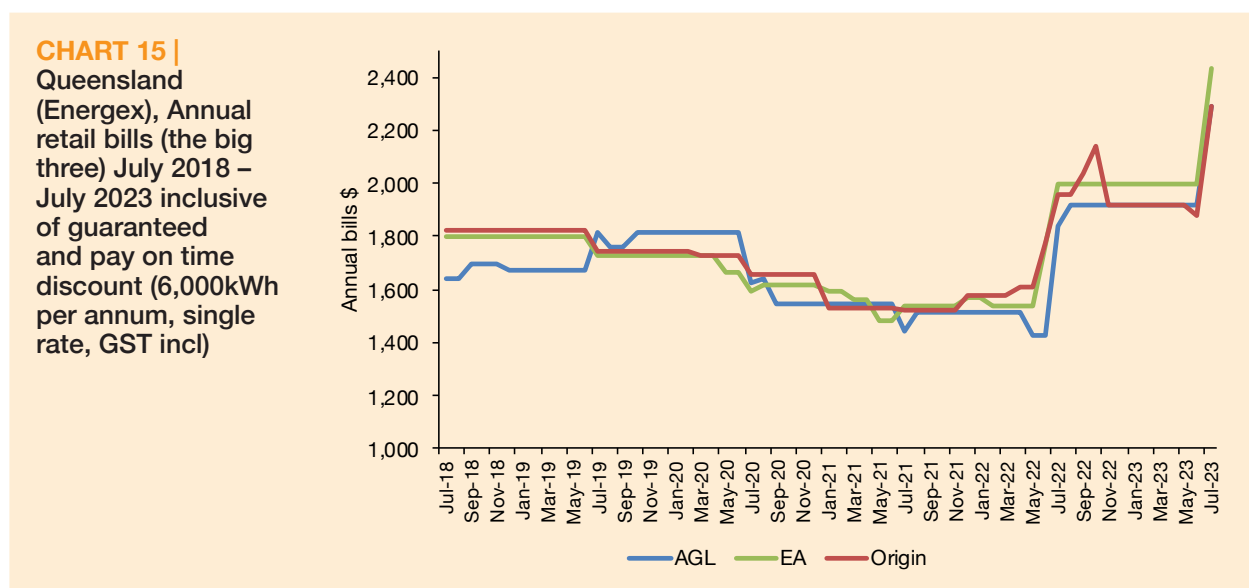
⁴⁶ Based on offers in the Energex network in Queensland, SAPN in South Australia, Ausgrid in NSW and Citipower in Victoria.

Over the last year, the maximum difference between the annual bills produced by the “big three” has been as high as \$385 in South Australia, \$310 in NSW (Ausgrid), \$220 in Victoria (Citipower) and \$140 in Queensland (Energex). In NSW, Victoria and South Australia the maximum price-spread peaked in October 2022 while the maximum price-spread occurred in July 2023 in Queensland.

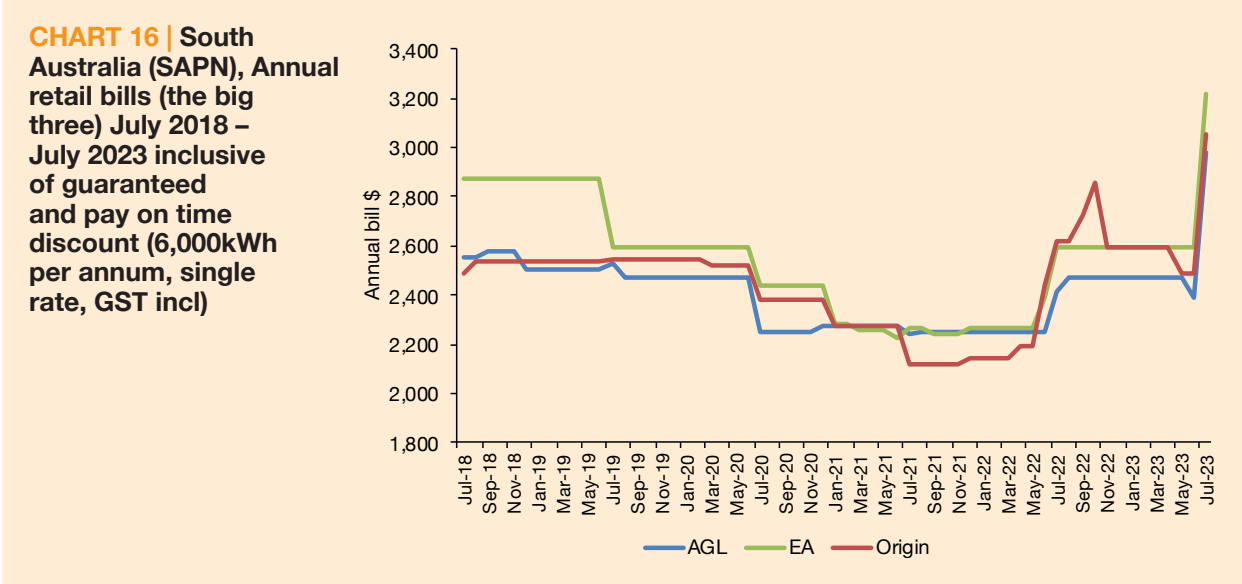
In NSW’s Ausgrid network area, the average maximum price-spread over the last year was approximately \$125. The difference was lowest from December 2022 to April 2023 (\$50) and highest in October/November 2022 (approximately \$310). As of July 2023, the difference was \$140. Chart 14 also shows that there was only a small difference (\$20) between AGL and Energy Australia’s annual bills in NSW from August 2022 to May 2023.



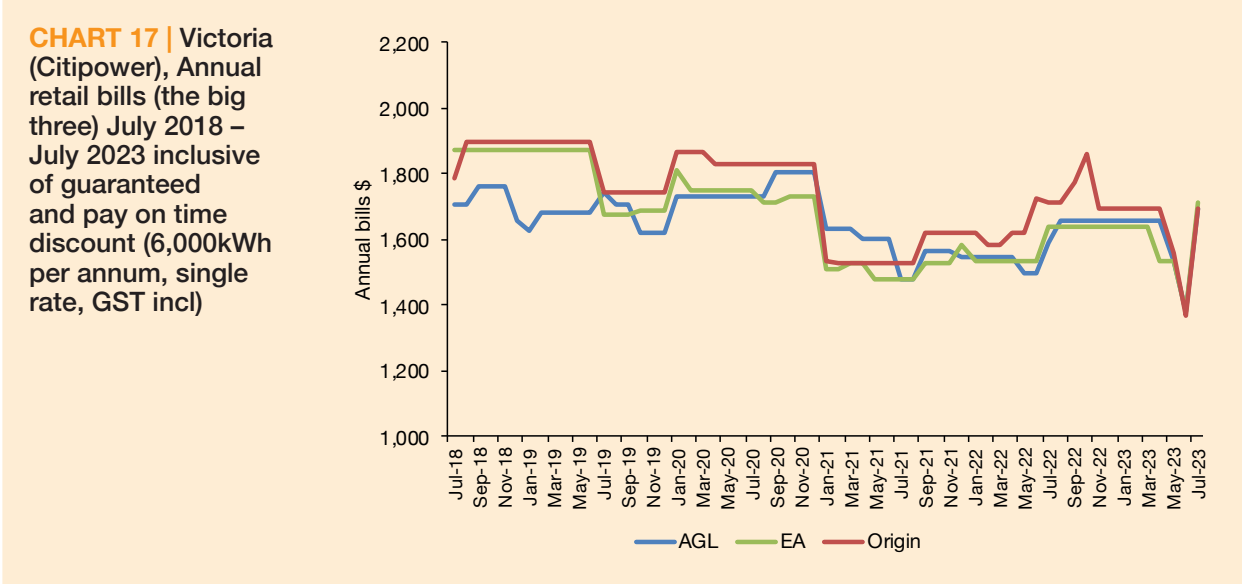
In Queensland’s Energex network area, the average maximum price-spread over the last year was around \$90. The difference was lowest in August 2022 (approximately \$45) and highest in July 2023 (approximately \$140). Chart 15 also shows that there was only a marginal difference (\$6) between AGL and Origin Energy’s annual bills in Queensland from November 2022 to June 2023.



In South Australia, the average maximum price-spread over the last year was \$175. The difference was lowest from November 2022 to May 2023 (approximately \$120) and highest in October 2022 (approximately \$385). As of July 2023, the difference was \$240. Chart 16 also shows that there was no difference between Energy Australia and Origin Energy’s annual bills in South Australia from November 2022 to May 2023.

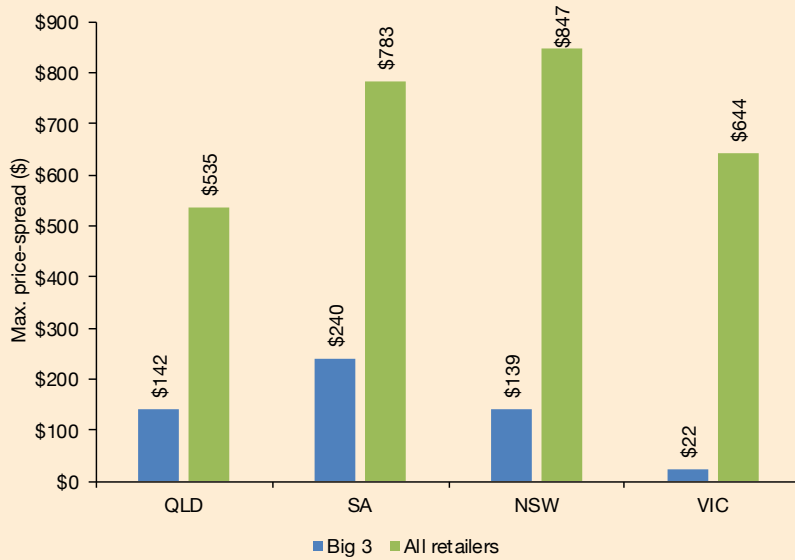


In Victoria’s Citipower network, the average maximum price-spread over the last year was approximately \$75. The difference was lowest in June 2023 (around \$15) and highest in October 2022 (approximately \$220). As of July 2023, the difference was around \$20. Chart 17 also shows that there was only a marginal difference (\$20 or less) between AGL and Energy Australia’s annual bills in Victoria for most of last year (except for in April 2023).



The above charts have analysed price-spread for the “big three” retailers only. Chart 18 below compares the maximum price-spread for all retailers to that of the “big three” for each jurisdiction as of July 2023. It shows that **the price-spread between the big three is much lower than the market overall.**

CHART 18 |
 Maximum difference between the big three's annual retail bills, all retailers' annual bills and all retailers' annual bills as of July 2023 in NSW, Queensland, South Australia and Victoria, inclusive of guaranteed and pay on time discount (6,000kWh per annum, single rate, GST incl)⁴⁷



⁴⁷ Based on offers in the Energex network in Queensland, SAPN in South Australia, Ausgrid in NSW and Citipower in Victoria.

6. Enabling product innovation

Product innovation and consumer choice are key reasons for introducing competitive retail markets.⁴⁸ To ensure innovation can occur, however, it is important that the relevant consumer protections and services, such as Energy Made Easy and Victorian Energy Compare, enable new products. In this year's Tariff-Tracking reports we decided to exclude Amber Electric. The company offers a retail product where they pass on the wholesale rates to their customers instead of a pre-agreed price. On Energy Made Easy, however, the price and product information statements require a set price for the energy used. In order to fulfil this requirement, Amber Electric have been publishing offers that are based on a maximum price customers will be charged for their usage. This offer typically makes Amber Electric one of the most expensive retailers. This year, however, Amber Electric also published on Energy Made Easy a market offer where the rates were based on historical wholesale costs. This offer made Amber Electric a highly competitive retailer. We decided against including this offer in our analysis firstly due to its speculative nature (i.e. there is no guarantee historical prices reflect future prices).⁴⁹ And secondly, because the offer potentially selectively excluded three months of higher prices by basing its calculation on historical wholesale data for the last nine months only.

Customers with significant time varying load (e.g. charging of electric vehicles) and with the ability to monitor and adapt their energy usage, may benefit from being on a fluctuating wholesale price product. We also believe that Amber Electric's product is one of the more innovative approaches taken in the electricity retail market. That said, it is important that customers understand what they are signing up to and have a way of comparing it to other more 'traditional' offers.

Looking to the near future, we know that customers with distributed energy resources can be charged an export tariff from 1 July 2025.⁵⁰ When the networks have had their two-way pricing tariffs approved by the AER, retailers may choose to take different approaches when passing on these costs to their customers. As recognised by the AER: "retailers may re-package network tariffs to give customers a bill that looks different to the network tariff".⁵¹ It is thus imperative that the AER is prepared to amend the Energy Made Easy comparison model to ensure that it can provide meaningful comparisons for retail offers to customers with distributed energy such as rooftop solar.

In addition to the introduction of two-way pricing, we also anticipate that some retailers may want to offer products with additional services. A basic example of one such service would be the capacity to monitor wholesale market prices in order to remotely run appliances, such as hot water systems, when prices are lower. Such service offerings may be beneficial to consumers, but it would also, of course, complicate the comparison of retail products.

There appears to be a mismatch between what we allow, encourage, or even hope, that the retailers will do in terms of innovating and 'packaging-up' new products, and what we enable them to do in order to comply with meaningful comparison services.

While we acknowledge that enabling new and different product offerings will make government comparison sites more complex in both design and operation, there is a risk that these comparison sites become a direct hindrance to product innovation. In our view, the aim of the comparison sites needs to balance the need for clear and accurate information to consumers, with useability and product innovation. One option could be to offer a tiered arrangement where customers can choose between the traditional, 'easily comparable' products as well as a more advanced option that includes new product types (albeit potentially with less accurate estimates).

⁴⁸ See, for example, <https://www.aemc.gov.au/energy-system/retail>

⁴⁹ Note that Amber Electric states that the offer is based on estimated prices but it is also reasonable to believe that users of Energy Made Easy will expect that these assumptions have been approved by the AER.

⁵⁰ See, for example, AER, Export Tariff Guidelines, May 2022 at https://www.aer.gov.au/system/files/AER%20-%20Export%20Tariff%20Guidelines%20-%20May%202022_0.pdf

⁵¹ Ibid, p 3