Time to shed some light on this market
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.

The NEM – Time to shed some light on this market
Observations from the Vinnies’ Tariff-Tracking Project

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Melbourne, November 2017

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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

This year, key findings from the Vinnies’ Tariff-Tracking project will also be presented as an interactive online map. The map will be made available at the St Vincent de Paul Society’s website: www.vinnies.org.au/energy in December 2017.
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Background: The Tariff-Tracking Project
The St Vincent de Paul Society, in conjunction with Alvis 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.

To date we have developed five workbooks for each of the National Electricity Market (NEM) jurisdictions.\(^1\) 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.\(^2\) 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 reasons for price increases over the last year.

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\(^1\) As Tasmania does not have regulated/standing offers for gas, only four workbooks have been produced for this jurisdiction.

\(^2\) The Victorian workbooks contain regulated/standing offers from July 2008 to July 2016 and market offers from July 2010 to July 2016. The NSW workbooks contain regulated offers from July 2009 to July 2015 and market offers from 2011 and 2016. The Queensland and South Australian workbooks contain regulated/standing offers from July 2009 to July 2016 and market offers from July 2012 to July 2016. The ACT workbooks contain regulated/standing offers from July 2009 to July 2016 and market offers from July 2013 to July 2016. The Tasmanian workbooks contain regulated electricity offers from July 2009 to July 2016, market (pay as you go) electricity offers from July 2009 to July 2016 and gas market offers from July 2013 to July 2016. From 2016, we 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 2017 in order to explore where and when prices have increased or decreased.

In relation to electricity, we find that regulated and standing offer prices (the base-rate) are up in most jurisdictions compared to July 2016. However, the size of the increases varies between jurisdictions. Gas prices have also increased in all jurisdictions. The highest prices in the country continue to be in South Australia for Electricity and Queensland for gas.

Section 2 ‘Electricity bills: Who gets what?’ 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, we estimate that the retail component in Victoria is between 11-18% (depending on network area). This is significantly lower than the 24-30% in NSW, 27% in South East Queensland, and 28% in South Australia. The estimated network component is greatest in Tasmania and Victoria’s Ausnet network (47%) while it is lowest in Victoria’s Citipower network (34%). The wholesale component is between 30-40% in Victoria, Tasmania and the ACT. It is lowest in NSW’s Essential network (22%). The Green scheme component is significantly greater in the ACT (15%) than in the other jurisdictions.

Section 3 ‘Bill-stacks over time’ analyses changes to the same bill components from July 2015 to July 2017.

The proportional retail component of bills in Victoria and the ACT has decreased. In South East Queensland (Energex), on the other hand, the retail component increased significantly in 2017. In relation to Network Use of System charges (NUOS), all jurisdictions experienced decreases in 2017. The wholesale component of bills has increased in all jurisdictions.

Section 4 ‘Price dispersions’ analyses the maximum price dispersion in competitive markets as well as monthly changes to the ‘three big’ retailers’ (AGL, Energy Australia and Origin) electricity market offers from August 2015 to July 2017 in NSW, Queensland, South Australia and Victoria.

The maximum difference between all electricity market offers is greatest in Victoria and South Australia (over $1,000) and lowest in the ACT (just under $100). In Queensland the difference is $400 and in NSW it is $800.3

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3 Based on an annual consumption of 6,000 kWh.
The maximum difference between the annual bills produced by the big three, however, is much lower ($100 - $200, depending on jurisdiction and time of year). Considering that the average annual bill, for households using 6,000 kWh per annum, for the same period was $1,560 in NSW, $1,815 in Queensland, $2,070 in South Australia and $1,460 in Victoria, the difference between the big retailers’ offers must be considered relatively low.

Section 5 ‘Solar offers’ compares solar offers available to new customers across the NEM as well as examining the various bill components of solar bills.

While Victorian customers currently have the second highest electricity bills in general (see chart 1), Victorian solar customers with this consumption level have, on average, lower annual bills compared to customers in other jurisdictions with lower overall electricity costs.

A comparison of solar bills as of July 2016 to bills as of July 2017 shows that the annual bills for solar customers in South Australia has increased the most (approximately by $150 for customers with this consumption level) while there were more modest increases in the ACT and NSW’s Ausgrid and Endeavour networks. In all other areas, solar bills have fallen. The bill-stack analysis for solar-offers shows that the retail component is negative in Victoria’s Citipower network and in the ACT (ActewAGL) while it is highest in South Australia (SAPN) at $248.4

Section 6 ‘Observations and recommendations’ highlights some of the issues identified in this report and proposes recommendations for how they can be addressed. To date, much of the high level policy focus has been on market design (the NEM), and energy reliability and emission reductions (the NEG). While improving affordability may be one of the long term policy goals, we believe that the Government needs to shed some light on the market to improve customer engagement and customer outcomes. Specifically, we recommend:

1) A policy review about the distribution of costs and benefits from roof top solar and battery storage and other consumer choices be initiated

A national approach should be considered to address the impact of increasingly common technologies, such as roof top solar and battery storage, and a policy vision for how costs and benefits should be shared and/or distributed across the community. In addition, state governments should commit to reviewing their own assistance measures, such as concessions, to ensure that measures are tailored and targeted to deliver assistance where most needed.

2) A revised National Energy Customer Framework

The development of a revised National Energy Customer Framework where the guiding first principle is consumer protection, rather than market (product) innovation and reliance upon effective competition and customers providing ‘explicit informed

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4 Note that this is based on components of customers’ bills and does not take into account retailers’ revenue from each customer type. The energy exported by solar customers does, for example, have a value to the retailers.
consent’. This should be an agreed national approach inclusive of states and territories.

3) Regulatory oversight in relation to product innovation and offerings
The establishment of a regulatory function that monitors retail products and product innovation. While it should encourage meaningful product innovation, it should also have a ‘zero tolerance policy’ when it comes to multiple products from the same retailer lacking meaningful differentiation. This regulatory oversight should be able to remove retail products developed to confuse, or even trick, customers.

4) Consumer information and comparison sites
A two-step process: Firstly, minimise the possibility of confusion (through regulatory provisions) and, secondly, ensure that government comparison sites are adequately resourced and that the awareness and uptake of these tools increases.
1. How energy prices are tracking

This section analyses changes to electricity and gas prices across Australia from July 2009 to July 2017 in order to explore where and when prices have increased or decreased.

1.1 Electricity prices

Regulated and standing offer prices (the base-rate) are up in most jurisdictions compared to July 2016. However, the size of the increases varies between jurisdictions. Chart 1 shows estimated annual bills for households consuming 6,000kWh per annum from July 2009 to July 2017. The dotted lines represent electricity bills in the Northern Territory and Western Australia, the two non-NEM jurisdictions. It shows that prices have increased (compared to July 2016) in all jurisdictions except Tasmania and the Northern Territory.

Looking at longer-term changes, chart 1 also shows the increasing differences in electricity prices between jurisdictions. While South Australia had the highest prices in July 2009 and July 2017, and ACT had the lowest, the difference between the annual bill for South Australian and ACT households (with this consumption level) has increased significantly. Prices in Victoria and NSW, on the other hand, are becoming increasingly similar.

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.
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 2017 for households consuming 30,000Mj per annum. It shows that gas prices are greatest in Queensland and lowest in Victoria. 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 2016.

Chart 2 also shows that the price difference between the jurisdictions has not increased since 2009. Unlike in the case of electricity, the difference between the jurisdiction with the highest prices (Queensland) and the jurisdiction with the lowest (Victoria) has remained steady around 55-60%.

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6 In Victoria and NSW the standing offer price is based on the average retail standing offer in each network area. 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 South Australia, the price is based on the average retail standing offer from July 2015 to July 2017, and AGL’s regulated/standing offer prior to that. In Queensland, the price is based on the average retail standing offer in July 2016 and 2017, 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.
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Chart 2 Changes to gas prices in Australia July 2009 to July 2017 as estimated annual bills (nominal, incl GST) for gas regulated/standing offers, 30,000MJ per annum

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 2017 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 2016 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.

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7 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 2017 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 2016 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. Electricity bills: Who gets what?

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. In Victoria, South Australia, NSW and Queensland, where retail prices are deregulated, effective competition is required to ensure that households do not pay more than necessary for both generation (wholesale) and retail services (including retail margins). This section therefore seeks to explore the cost of each component for each jurisdiction, as well as changes to these cost components over time.

As shown by chart 1 above, electricity bills increased significantly from July 2009 to July 2014 (prior to the repeal of the carbon tax) before declining, to various extents, post the repeal and with new network tariffs taking effect in July 2015. In July 2016 and July 2017, however, electricity bills increased in most jurisdictions.

Chart 3 below shows that Network Use of System (NUOS) charges increased in all of the NEM electricity networks between July 2009 and July 2014, before decreasing in most jurisdictions (NSW, Queensland, South Australia and the ACT) in July 2015. In 2016 it also decreased in the Victorian networks and Tasmania, and again (slightly) in South Australia. In 2017 the decreases have been significant in Tasmania and Queensland (Energex). The NUOS costs were also reduced in all three NSW networks as well as Victoria’s Citipower network. In the remaining networks the NUOS has remained stable or increased slightly.

Chart 3 also shows that the NUOS price changes, vary significantly between the networks. Households in country NSW (Essential’s network) pay the highest NUOS charges in the NEM despite recent decreases. The NUOS charges are lowest in Victoria’s Citipower, United Energy, Jemena and Powercor networks and the ACT (ActewAGL’s network). The difference between NUOS costs in the various networks is also reducing. Currently an annual “NUOS bill”, for this consumption level, is approximately $415 more in Essential compared to Citipower. In 2012, on the other hand, the difference was $990.
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Chart 3 NUOS charges from July 2009 to July 2017 as estimated annual cost (GST exclusive) for households using 6,000kWh per annum, single rate

Chart 4 below looks at NUOS charges as a proportion of total bill. It shows that the NUOS proportion of electricity bills is still highest in Tasmania (Tasnetworks) and that all network areas have experienced a decrease in NUOS proportion since last year (July 2016).

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8 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. Note that as United Energy’s NUOS charge has been a seasonal tariff over the last four years, the United Energy consumption used in these calculations is thus based on a proportional allocation of a 5 month summer tariff and a 7 month non-summer (off-peak) rate.
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Chart 4 NUOS charges (excl GST) from July 2009 to July 2017 as proportion (%) of annual retail bill (incl. GST) for electricity regulated/standing offers, 6,000kWh per annum, single rate

Chart 5 compares the NUOS proportion of bills in July 2016 to July 2017. It shows that the biggest decreases occurred in Tasmania, Queensland, NSW and the ACT.

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9 In Victoria the standing offer bill is based on the average incumbent (AGL, Origin and Energy Australia) standing offer as of July every year. 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) as of July 2014 and July 2015. 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. Note that as United Energy’s NUOS charge has been a seasonal tariff over the last three years, the United Energy consumption used in these calculations is thus based on a proportional allocation of a 5 month summer tariff and a 7 month non-summer (off-peak) rate.
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, table 1 below deducts estimated cost components from the average annual retail bill for households using 6,000kWh per annum as of July 2017.11

As we do not know exactly what retailers pay for wholesale energy we have used several data sources in order to arrive at an estimated wholesale cost. The AEMC’s last price trend review included a consultant report into wholesale prices that estimated that the energy purchase cost in 2017/18 (financial year) would be approximately:

$55/MWh in the ACT;
$55/MWh in NSW;
$60/MWh in Queensland;
$110/MWh in South Australia;
$82/MWh in Tasmania; and
$80/MWh in Victoria.12

The Australian Energy Market Operator (AEMO) publishes average spot-prices and the average annual spot price for 2015/16 was:

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10 Ibid.
11 Note that consumption levels and other assumptions (e.g. wholesale costs) applied to the analysis in this report may differ from analyses presented in various jurisdictional Tariff-Tracking up-date reports in 2017. These differences can have significant impact on the size of the various bill components.
12 Frontier Economics, 2016 Residential Electricity Price Trends Report, A report prepared for the AEMC November 2016), tables 16-27. Note that this report presented energy purchase costs for each network area and we have used the approximate amount (Net System Load Profile) for each jurisdiction as shown in the base case scenario for 2017/18.
$88/MWh in NSW and the ACT;
$86/MWh in Queensland;
$104/MWh in South Australia;
$87/MWh in Tasmania; and
$84/MWh in Victoria.\(^\text{13}\)

Since retailers are, to various degrees, exposed to high spot-prices but also manage this risk through hedging contracts, we believe a starting point for estimating wholesale costs are somewhere in between the spot-price and the estimated cost of purchasing. The wholesale cost we apply to bills as of July 2017 is therefore:

<table>
<thead>
<tr>
<th>State</th>
<th>Cost per MWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACT</td>
<td>$72</td>
</tr>
<tr>
<td>NSW</td>
<td>$72</td>
</tr>
<tr>
<td>Queensland</td>
<td>$71</td>
</tr>
<tr>
<td>South Australia</td>
<td>$107</td>
</tr>
<tr>
<td>Tasmania</td>
<td>$85</td>
</tr>
<tr>
<td>Victoria</td>
<td>$82</td>
</tr>
</tbody>
</table>

After deducting GST, NUOS costs, wholesale costs, the cost of environmental policies ("green schemes") and the cost of rolling out smart meters (Victoria only), the retail component of a residential bill (final column) is as low as $317 (in the ACT) and as high as $885 (in South Australia). Chart 6 below shows the same bill deconstruction as those in table 2.

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Table 2 Deduction of bill components for regulated/standing offers, average annual bill based on offers taking effect post July 2017 (6,000kWh per annum, single rate)\(^{14}\)

<table>
<thead>
<tr>
<th></th>
<th>Retail bill incl. GST(^{\wedge})</th>
<th>Retail bill excl. GST</th>
<th>Retail bill excl. GST, NUOS*</th>
<th>Retail bill excl. GST, NUOS and wholesale(^{\wedge\wedge})</th>
<th>Retail bill excl. GST, NUOS, wholesale and “green scheme” costs(^{\ast})</th>
<th>Retail bill excl. GST, NUOS, wholesale, “green scheme” costs and smart meter costs(^{***})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citipower</td>
<td>2,001</td>
<td>1,819</td>
<td>1,350</td>
<td>858</td>
<td>748</td>
<td>659</td>
</tr>
<tr>
<td>Powercor</td>
<td>2,241</td>
<td>2,037</td>
<td>1,454</td>
<td>962</td>
<td>852</td>
<td>762</td>
</tr>
<tr>
<td>Ausnet</td>
<td>2,414</td>
<td>2,195</td>
<td>1,436</td>
<td>944</td>
<td>834</td>
<td>707</td>
</tr>
<tr>
<td>Jemena</td>
<td>2,223</td>
<td>2,021</td>
<td>1,440</td>
<td>948</td>
<td>838</td>
<td>779</td>
</tr>
<tr>
<td>UE</td>
<td>2,113</td>
<td>1,921</td>
<td>1,394</td>
<td>902</td>
<td>793</td>
<td>727</td>
</tr>
<tr>
<td>ActewAGL</td>
<td>1,655</td>
<td>1,505</td>
<td>952</td>
<td>520</td>
<td>317</td>
<td></td>
</tr>
<tr>
<td>Tasnetworks</td>
<td>1,892</td>
<td>1,720</td>
<td>937</td>
<td>427</td>
<td>355</td>
<td></td>
</tr>
<tr>
<td>EnergeX</td>
<td>2,096</td>
<td>1,905</td>
<td>1,178</td>
<td>752</td>
<td>621</td>
<td></td>
</tr>
<tr>
<td>Ausgrid</td>
<td>2,274</td>
<td>2,067</td>
<td>1,321</td>
<td>889</td>
<td>784</td>
<td></td>
</tr>
<tr>
<td>Endevour</td>
<td>2,120</td>
<td>1,927</td>
<td>1,261</td>
<td>829</td>
<td>724</td>
<td></td>
</tr>
<tr>
<td>Essential</td>
<td>2,444</td>
<td>2,222</td>
<td>1,337</td>
<td>905</td>
<td>800</td>
<td></td>
</tr>
<tr>
<td>SAPN</td>
<td>2,840</td>
<td>2,582</td>
<td>1,700</td>
<td>1,058</td>
<td>885</td>
<td></td>
</tr>
</tbody>
</table>

\(^{\wedge}\) As per chart 1 above
\(^{\ast}\) As per chart 3 above
\(^{\wedge\wedge}\) As per table 1 above
\(^{\ast\ast}\) 2.19 c/kWh in Qld, 3.39 c/kWh in ACT, 2.88 c/kWh in SA, 1.75 c/kWh in NSW, 1.83 c/kWh in Vic, and 1.20 c/kWh in Tasmania\(^{15}\)

\(^{***}\) Based on AER estimated AMI charges for 2017\(^{16}\)

Chart 6 below compares the total retail bill and the retail component for 2017 (as per table 2 above) to the analysis presented in last year’s report.\(^{17}\) The columns show the total bill (including GST) in 2016 and 2017 while the white round markers show the retail component in 2016 and the black line marker the retail component in 2017. It shows that the retail component is significantly greater in NSW and Queensland in 2017 compared to 2016, while in the Victorian networks, the overall bills increased in 2017 but the retail component is somewhat lower in all networks except Jemena. In

\(^{14}\) This table is based on the same offers used for July 2017 in chart 1 above. 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.

\(^{15}\) The “green scheme” costs include Renewable Energy Targets, Feed in Tariffs and other jurisdictional schemes. The AEMC report, 2016 Residential Electricity Price Trends (December 2016) estimated the cost of environmental policies for each jurisdiction and costs used for this report are based on the cost of environmental policies (c/kWh) in 2017/18 multiplied by 6 MW.

\(^{16}\) To estimate the impact of the Victorian smart meter rollout on the bill-stack, we used AER’s indicative average annual metering bill for 2017. See table 1-2 in AER, Advanced Metering Infrastructure, Transition charges applications, Final Decision (December 2016)

\(^{17}\) See table 2 in St Vincent de Paul Society and Alviss Consulting, The NEM – A hazy retail maze, December 2016
the ACT, where the standing offer is regulated, the overall bill has increased significantly but the retail component has only increased slightly.

**Chart 6** Total annual bills and retail components in July 2016 and July 2017 (for electricity regulated/standing offers, 6,000kWh per annum, single rate, excluding GST)\(^{18}\)

![Chart 6](chart6.png)

Chart 7 below is based on the same calculations presented in table 2 above but shows the various bill components as a percentage of the total bill. While we stress that some of the cost components are based on estimates rather than actual known costs, we believe chart 7 clearly illustrates that the cost of retail is significant in some network areas.\(^{19}\)

Our estimates show that between 21-39% of the bills paid by households goes to the retailer, this is, however, somewhat lower compared to last year. At the same time the amount that goes to pay for the actual electricity used (wholesale), has increased to 19-30% of the bill (compared to 14–16% last year). In all Victorian network areas except Ausnet, the retail cost is still proportionally higher than the network charges (NUOS). This is now also the case in two of the NSW network areas (Ausgrid and Endeavour). It is not just Victoria that has a high retail proportion. All of the NSW network areas also show a retail proportion that is 36-38% of the total bill and in South Australia and Queensland the retail proportion is 34% and 33% respectively. The retail component remains lowest in the ACT and Tasmania.

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\(^{18}\) This chart is based on the calculation used table 1 above

\(^{19}\) Cost of retail includes both retail costs and margins (profits).
A longstanding feature of market offers in the NEM retail markets has been to offer a discount on the published rates. The vast majority of retail offers now include a conditional discount that the customer will receive if the bill is paid by the due date.

As the calculations for the charts above are based standing and/or regulated prices, a bill-stack analysis for market offers is included below. Table below deducts estimated cost components from average annual retail market offer bill (including pay time discounts) for households using 6,000kWh per annum post July 2017. After deducting GST, NUOS costs, wholesale costs, the cost of environmental policies (“green schemes”) and the cost of rolling smart meters (Victoria only), amounts in the final column are as low as approximately $208 in the ACT and as high as $657 in South Australia. By comparing these figures to the regulated/standing offers examined in table 2 above, we can see that the retail component of bills varies significantly between regulated/standing offers and market offers (including pay on time discounts) in most network areas. We do note, however, that not all customers will receive these conditional discounts and that the retail component will in reality be greater than this.

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**Chart 7** Estimated bill-stack for regulated/standing offers, average annual bill based on the offers taking effect post July 2017 (6,000kWh per annum, single rate, excluding GST)

> It is not just Victoria that has a high retail proportion. All of the NSW network areas also show a retail proportion that is 36-38% of the total bill and in South Australia and Queensland the retail proportion is 34% and 33% respectively. The retail component remains lowest in the ACT and Tasmania.

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20 This chart is based on the calculation used for table 2 above
21 These offers were collected between mid-July and mid-September 2017.
22 Note that Tasmania experienced exceptionally high wholesale costs during this period.
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### Table 3
Deduction of bill components for market offers (including pay on time discounts), average annual bill based on offers taking effect post July 2017 (6,000kWh per annum, single rate)

<table>
<thead>
<tr>
<th>Retailer</th>
<th>Retail bill incl. GST(^^)</th>
<th>Retail bill excl. GST</th>
<th>Retail bill excl. GST and NUOS(^)</th>
<th>Retail bill excl. GST, NUOS, wholesale and “green scheme” costs(^*)</th>
<th>Retail bill excl. GST, NUOS, wholesale, “green scheme” costs and smart meter costs**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citipower</td>
<td>1,522</td>
<td>1,384</td>
<td>914</td>
<td>422</td>
<td>312</td>
</tr>
<tr>
<td>Powercor</td>
<td>1,704</td>
<td>1,549</td>
<td>966</td>
<td>474</td>
<td>364</td>
</tr>
<tr>
<td>SP Ausnet</td>
<td>1,831</td>
<td>1,665</td>
<td>906</td>
<td>414</td>
<td>304</td>
</tr>
<tr>
<td>Jemena</td>
<td>1,666</td>
<td>1,515</td>
<td>933</td>
<td>441</td>
<td>331</td>
</tr>
<tr>
<td>UE</td>
<td>1,586</td>
<td>1,442</td>
<td>915</td>
<td>423</td>
<td>314</td>
</tr>
<tr>
<td>ActewAGL</td>
<td>1,536</td>
<td>1,396</td>
<td>844</td>
<td>412</td>
<td>208</td>
</tr>
<tr>
<td>Aurora</td>
<td>1,892</td>
<td>1,720</td>
<td>937</td>
<td>427</td>
<td>355</td>
</tr>
<tr>
<td>Enerex</td>
<td>1,945</td>
<td>1,768</td>
<td>1,041</td>
<td>615</td>
<td>483</td>
</tr>
<tr>
<td>Ausgrid</td>
<td>1,848</td>
<td>1,680</td>
<td>934</td>
<td>502</td>
<td>397</td>
</tr>
<tr>
<td>Endeavour</td>
<td>1,887</td>
<td>1,715</td>
<td>1,049</td>
<td>617</td>
<td>512</td>
</tr>
<tr>
<td>Essential</td>
<td>2,199</td>
<td>1,999</td>
<td>1,114</td>
<td>682</td>
<td>577</td>
</tr>
<tr>
<td>SAPN</td>
<td>2,119</td>
<td>1,926</td>
<td>1,053</td>
<td>693</td>
<td>516</td>
</tr>
</tbody>
</table>

\(^^\) Based on market offers available post July 2017 (including guaranteed and pay on time discounts) offered by the same retailers included in the analysis of standing/regulated offers (table 2), except for the ACT where the standing offer is regulated. In the ACT, the market offer bill is based on the average retail market offer.

\(^\) As per table 1 above.

\(^*\) 2.19 c/kWh in Qld, 3.39 c/kWh in ACT, 2.88 c/kWh in SA, 1.75 c/kWh in NSW, 1.83 c/kWh in Vic, and 1.20 c/kWh in Tasmania

\(^**\) Based on AER estimated AMI charges for 2017

Chart 8 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. Again, we stress that some of the cost components are based on estimates rather than actual, known costs.

---

23 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.

24 The “green scheme” costs include Renewable Energy Targets, Feed in Tariffs and other jurisdictional schemes. The AEMC report, 2016 Residential Electricity Price Trends (December 2016) estimated the cost of environmental policies for each jurisdiction and costs used for this report are based on the cost of environmental policies (c/kWh) in 2017/18 multiplied by 6 MW.

25 To estimate the impact of the Victorian smart meter rollout on the bill-stack, we used AER’s indicative average annual metering bill for 2017. See table 1-2 in AER, Advanced Metering Infrastructure, Transition charges applications, Final Decision (December 2016)

26 Cost of retail includes both retail costs and margins (profits).
Chart 8 Estimated bill-stack for market offers, average annual bill based on the offers taking effect post July 2017 (6,000kWh per annum, single rate, excluding GST)²⁷

Chart 8 above shows that the retail component of bills is smaller for market offers (if customers pay on time and thus receive a discount) compared to standing/regulated offers in most jurisdictions (see chart 7). That said, the size of the retail component of the total market offer bill is still high in many network areas.

Compared to last year’s market offers (July 2016), the retail component has increased in some network areas and decreased in others. Chart 9 below shows the estimated retail component (%) of market offer bills in 2017 compared to 2016. It shows that the proportional retail component of market offer bills has increased the most in NSW’s Essential and Endeavour network areas, and in South East Queensland (Energex). In Victoria the ACT and Tasmania, on the other hand, it has decreased significantly.

²⁷ This chart is based on the calculation used for table 3 above
Chart 9 Retail proportion of market offers, average annual bill based on the offers taking effect post July 2016 and 2017 (6,000 kWh per annum, single rate, excluding GST)\textsuperscript{28}

\textsuperscript{28} This chart is based on the calculation used for table 3 above as well as table 13 in St Vincent de Paul Society and Alviss Consulting, The NEM – Still winging it? September 2015
3. Bill-stacks over time

This is the third year we produce ‘bill-stack’ analysis for market offers based on the same methodology and this section examines changes to the various bill-stack components in each jurisdiction from 2015 to 2017.

Chart 10 below shows the various bill components as a percentage of the total bill for each jurisdiction from 2015 to 2017.29

Chart 10 Estimated bill-stack for market offers, average annual bill based on the offers taking effect post July 2015, 2016 and 2017 (6,000kWh per annum, single rate, excluding GST)

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29 For 2017 this analysis is based on the same assumptions used for table 3 and chart 8 above. For 2016 analysis the estimated wholesale costs are: $44/MWh in ACT, $45/MWh in NSW, $64/MWh in Qld, $60/MWh in SA, $58/MWh in Tas and $44/MWh in Vic. The green scheme charges used are 3.73 c/kWh in Qld, 2.51 c/kWh in ACT, 2.95 c/kWh in SA, 1.66 c/kWh in NSW, 2.12 c/kWh in Vic, and 0.96 c/kWh in Tasmania. For 2015 analysis the estimated wholesale costs are approximately: $37/MWh in ACT and NSW, $49/MWh in Qld, $60/MWh in SA, $36/MWh in Tas and $33/MWh in Vic. The green scheme charges used are 11% of bill excluding GST in Qld, 12% in ACT and SA, 7% in NSW and Vic, and 4% in Tasmania. Note that as both ACT and Queensland had regulated standing offers in 2015, the market offer bill for 2015 is based on the average retail market offer for both jurisdictions. For all other jurisdictions, the market offers are based on the incumbent retailers’ offers as per methodology in section 2 above. Tasmania is the exception where all analysis is based on the regulated offer (as there are no market offers available). To find sources for 2015 and 2016 analysis see reports: The NEM – Still winging it (September 2015) and The NEM – A hazy retail maze (December 2016) at www.vinnies.org.au/energy
Chart 10 above shows that the NUOS component has decreased in all jurisdictions between July 2015 and July 2016 while the wholesale component has increased. In relation to retail and green scheme costs, however, the trends vary between jurisdictions.

Chart 11 below shows the NUOS proportion (%) of bills in each jurisdiction from July 2015 to July 2017. It shows that the NUOS proportion has fallen significantly in Tasmania, South Australia, South East Queensland and NSW. The decreases are more moderate in Victoria and the ACT, where the component was smaller to start with.

**Chart 11** Estimated NUOS proportion (%) of market offers, average annual bill based on the offers taking effect post July 2015, 2016 and 2017 (6,000kWh per annum, single rate, excluding GST)

Chart 12 shows the wholesale cost proportion (%) of bills in each jurisdiction from July 2015 to July 2017. It shows that the wholesale proportion has increased significantly in Victoria, Tasmania and the ACT. In NSW, South Australia and South East Queensland, the increases are more moderate.
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Chart 12 Estimated wholesale proportion (%) of market offers, average annual bill based on the offers taking effect post July 2015, 2016 and 2017 (6,000kWh per annum, single rate, excluding GST)

Chart 13 shows the retail cost proportion (%) of bills in each jurisdiction from July 2015 to July 2017. It shows that the retail proportion has decreased significantly in Victoria over the last year. In the ACT it has increased since July 2016 but it is significantly lower than what it was in July 2015. In Tasmania there has been a moderate increase in July 2017 while the increase in South East Queensland is significant. In NSW, the retail proportion of bills increased somewhat in both July 2016 and July 2017. South Australia has seen a similar increase to NSW in July 2017 after a significant rise in July 2016.

Chart 13 Estimated retail proportion (%) of market offers, average annual bill based on the offers taking effect post July 2015, 2016 and 2017 (6,000kWh per annum, single rate, excluding GST)
Chart 14 shows the green scheme proportion (%) of bills in each jurisdiction from July 2015 to July 2017. It shows that the green scheme proportion increased in the ACT in both 2016 and 2017 and in Tasmania it also increased this year after falling in 2016. In all the other jurisdictions the green scheme proportion of bills decreased this year.

**Chart 14** Estimated green scheme proportion (%) of market offers, average annual bill based on the offers taking effect post July 2015, 2016 and 2017 (6,000kWh per annum, single rate, excluding GST)
4. Price dispersion

This section analyses maximum price dispersion in competitive markets as well as monthly changes to the ‘three big’ retailers’ (AGL, Energy Australia and Origin) electricity market offers from August 2015 to July 2017 in NSW, Queensland, South Australia and Victoria. It compares differences to annual bills including pay on time discounts as well as one off inducements such as account credits and one month free electricity. It shows that the difference between the big three retailers’ offers is remarkably low in some jurisdictions and/or months.

Chart 15 shows the difference to annual bills (6,000 kWh per annum, single rate) between the best and the worst market offer in each jurisdiction. It shows that the difference is greatest in Victoria and South Australia (over $1,000) and lowest in the ACT (just under $100). In Queensland the difference is $400 and in NSW it is $800.

Chart 15 Maximum difference between annual retail bills (all retailers), July 2017 inclusive of pay on time discount (6,000 kWh per annum, single rate, GST incl)

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30 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 offers compared are Energy Australia’s ‘Flexi Saver’, AGL’s ‘Savers’ and Origin’s ‘Daily Saver Plus’ until it was discontinued in October 2015 and Origin’s ‘Saver’ product was introduced.

31 In NSW and Victoria, these are averaged across all network areas.
The maximum difference between the annual bills produced by the big three is typically $100 - $200, depending on jurisdiction and time of year. Charts 16 - 20 below show the retail offers as annual bills for customers using 6,000 kWh per annum for each of the jurisdictions.

In NSW’s Ausgrid network area, the maximum price-spread between the three retailers was $137 in November 2015. The difference was lowest in May – June 2016 (approximately $20) and as of July 2017 the difference was around $140. Energy Australia’s offers (the incumbent retailer) produced the lowest bills throughout the period (except as of July 2017), while the difference between AGL and Origin’s offers was negligible until September 2016 when AGL increased its discounts.

**Chart 16** NSW (Ausgrid), Annual retail bills (the big three) August 2015 – July 2017 inclusive of pay on time discount (6,000kWh per annum, single rate, GST incl)

In Queensland’s Energex network area, the maximum price-spread between the three retailers was $176 from February to April 2016. The main reason for the difference in annual bills being higher during these three months was AGL’s move to make their discounts conditional upon direct debit. The difference was lowest in September 2015 (no difference) and as of July 2017 the difference was $40. Origin’s offers produced the highest bills for most of this period, except for the four months when AGL’s discount was conditional upon direct debit payments, but the difference between the three retailers is otherwise very small.

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32 Direct debit discounts as well as additional discounts for customers that sign up for dual fuel offers are not included in this analysis.
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**Chart 17** Queensland (Energex), Annual retail bills (the big three) August 2015 – July 2017 inclusive of pay on time discount (6,000kWh per annum, single rate, GST incl)

In South Australia, the difference between the three big retailers’ offers is greater. As of July 2017 the difference was approximately $240. The difference was lowest in April 2017 ($50).

**Chart 18** South Australia (SAPN), Annual retail bills (the big three) August 2015 – July 2017 inclusive of pay on time discount (6,000kWh per annum, single rate, GST incl)

In Victoria’s Citipower network, the maximum price-spread between the three retailers was $150 in November 2015. The difference was lowest in January 2016 and January 2017 (approximately $20) which is the month the regulated network prices change in Victoria. As of July 2017 the difference was approximately $65.
The average maximum difference to annual bills over the 24 month period is approximately $90 in NSW, $75 in Queensland, $130 in South Australia and $60 in Victoria. Chart 20 shows the maximum difference between the big three’s annual bills in each state over the 24 month period. It shows that there are now clear trends in terms of when dispersion increases/decreases except that the spikes appear to occur in only one or two states at the same time.
Compared to chart 15 above, that shows maximum price-spread based on all retailers, the price-spread between the big three is clearly much lower. Moreover, the price dispersion, based on all retailers, is greatest in Victoria while the price difference between the big three is greatest in NSW and Queensland. Chart 21 below shows the maximum price spread for all retailers (as per chart 15) compared to the big three in each jurisdiction as of July 2017.

**Chart 21** Maximum difference between the big three’s annual retail bills and all retailers annual bills as of July 2017, inclusive of pay on time discount (6,000kWh per annum, single rate, GST incl)

As mentioned above, all three retailers have offered various one off incentives (i.e account credits for signing up online and supply charge waivers) since August 2015. The value of these one-off incentives has not been included in the annual bill calculations presented in the above analysis. Charts 22 - 25 show annual bills for each jurisdiction from August 2015 to July 2017 inclusive of one off incentives.33 They show that the maximum price spread is higher in NSW when we include these incentives in the annual bill calculation while they make little difference to the maximum price spread in Queensland, South Australia and Victoria.

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33 E.g. welcome credits and “1 month free”. Not including incentives or discounts conditional upon dual fuel or direct debit contracts.
**Chart 22** NSW (Ausgrid), Annual retail bills (the big three) August 2015 – July 2017 inclusive of pay on time discount and one off incentives (6,000kWh per annum, single rate, GST incl)

**Chart 23** Queensland (Energex), Annual retail bills (the big three) August 2015 – July 2017 inclusive of pay on time discount and one off incentives (6,000kWh per annum, single rate, GST incl)
Chart 24 South Australia (SAPN), Annual retail bills (the big three) August 2015 – July 2017 inclusive of pay on time discount and one off incentives (6,000kWh per annum, single rate, GST incl)

Chart 25 Victoria (Citipower), Annual retail bills (the big three) August 2015 – July 2017 inclusive of pay on time discount and one off incentives (6,000kWh per annum, single rate, GST incl)
On average, the maximum difference to the annual bill between the three retailers’ offers (including pay on time discounts and one off incentives) from August 2015 to July 2017 was $130 in NSW, $95 in Queensland, $140 in South Australia and $85 in Victoria. Considering that the average annual bill, for households using 6,000 kWh per annum, for the same period was $1,560 in NSW, $1,815 in Queensland, $2,070 in South Australia and $1,460 in Victoria, the difference between the big retailers’ offers must be considered relatively low.  

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34 Average bill based on the big three’s annual bills inclusive of discounts and one off incentives from August 2015 to July 2017.
5. Solar offers

This year was the second year the Tariff-Tracking project covered 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). The analysis presented below is based on 3 kW systems in urban locations and the assumptions applied are shown in Table 4.

Table 4 Assumptions: Generation capacity and export (%) in capital cities, 3 kW systems

<table>
<thead>
<tr>
<th>Capital cities</th>
<th>Annual generation per kW installed</th>
<th>Export rates (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adelaide</td>
<td>1.680 MWh</td>
<td>51.8%</td>
</tr>
<tr>
<td>Brisbane</td>
<td>1.736 MWh</td>
<td>53.4%</td>
</tr>
<tr>
<td>Melbourne</td>
<td>1.539 MWh</td>
<td>47.4%</td>
</tr>
<tr>
<td>Hobart</td>
<td>1.185 MWh</td>
<td>47.4%</td>
</tr>
<tr>
<td>Canberra</td>
<td>1.801 MWh</td>
<td>55.1%</td>
</tr>
<tr>
<td>Sydney</td>
<td>1.614 MWh</td>
<td>49.9%</td>
</tr>
</tbody>
</table>

Chart 26 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. While Victorian customers currently have the second highest electricity bills in general (see chart 1 in section 1.1), Victorian solar customers with this consumption level have, on average, lower annual bills compared to customers in other jurisdictions with lower overall electricity costs.

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35 The export rates and generation capacities (Except for Hobart and Canberra) are based on Melbourne and were used for the analysis presented in a report for the Alternative Technology Association (ATA) by Alviss Consulting (Alviss Consulting, Retail Offers and Market Transparency for New Solar Customers, June 2013). 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.

36 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.
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**Chart 26** Annual retail bills for solar customers post July 2017, inclusive of pay on time discounts and FIT credits (6,000kWh per annum, single rate, GST incl)

“...The minimum FIT rate increased significantly in Victoria from 1 July 2017 (it is currently 11.3 c/kWh) and this has had significant impact on reducing bills for Victorian solar customers. The annual bills for solar customers in South Australia has increased the most...”

Chart 27 below compares solar bills as of July 2016 to bills as of July 2017. It shows that the annual bills for solar customers in South Australia has increased the most (approximately by $150 for customers with this consumption level) while there were more modest increases in the ACT and NSW’s Ausgrid and Endeavour networks. In all other areas, solar bills have fallen.”
The NEM – Time to shed some light on this market

Chart 27 Annual retail bills for solar customers post July 2016 and 2017, inclusive of pay on time discounts and FIT credits (6,000kWh per annum, single rate, GST incl)\textsuperscript{37}

Chart 28 compares average solar customer bills to average non-solar bills in each network area and it shows that the difference is greatest in South Australia and Victoria’s Ausnet network and lowest in Tasmania.

Chart 28 Annual retail bills for non-solar customers and solar customers post July 2017, inclusive of pay on time discounts and FIT credits (6,000kWh per annum, single rate, GST incl)

\textsuperscript{37} 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.
The difference in South Australia is partly explained by retailers, on average, offering higher FIT rates compared to other jurisdictions (see table 5 below) but also because solar customers avoid kWh (because of their own generation) that non-solar customers do not. This generation/avoided purchase becomes even more valuable when the tariff applied is an inclining block tariff where the price per kWh increases significantly with increase in overall consumption.

Table 5 Annual average FIT credit, market offers July 2017, 6,000kWh per annum, single rate

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Average annual FIT credit ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>$345</td>
</tr>
<tr>
<td>QLD</td>
<td>$295</td>
</tr>
<tr>
<td>Vic</td>
<td>$260</td>
</tr>
<tr>
<td>NSW</td>
<td>$255</td>
</tr>
<tr>
<td>ACT</td>
<td>$250</td>
</tr>
<tr>
<td>TAS</td>
<td>$115</td>
</tr>
</tbody>
</table>

Table 6 below deducts the various bill components of solar bills (from left to right) and after deducting GST, NUOS costs, wholesale costs, the cost of environmental policies (“green schemes”) and the cost of rolling out smart meters (Victoria only), amounts in the final column, effectively the retail component, is negative in Victoria’s Citipower network and in the ACT (ActewAGL) while it is highest in South Australia (SAPN) at $248.38

38 Note that this is based on components of customers’ bills and does not take into account retailers’ revenue from each customer type. The energy exported by solar customers does, for example, have a value to the retailers.
Table 6 Deduction of bill components for solar market offers (including pay on time discounts), average annual bill based on offers taking effect post July 2017 (6,000kWh per annum, single rate). Metropolitan households with 3kW system installed

<table>
<thead>
<tr>
<th>Retail bill incl. GST^</th>
<th>Retail bill excl. GST</th>
<th>Retail bill excl. GST, NUOS and wholesale^^</th>
<th>Retail bill excl. GST, NUOS, wholesale and “green scheme” costs*</th>
<th>Retail bill excl. GST, NUOS, wholesale, “green scheme” costs and smart meter costs**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citipower</td>
<td>815</td>
<td>741</td>
<td>427</td>
<td>135</td>
</tr>
<tr>
<td>Powercor</td>
<td>944</td>
<td>858</td>
<td>461</td>
<td>168</td>
</tr>
<tr>
<td>Ausnet</td>
<td>1046</td>
<td>951</td>
<td>489</td>
<td>196</td>
</tr>
<tr>
<td>Jemena</td>
<td>911</td>
<td>828</td>
<td>470</td>
<td>178</td>
</tr>
<tr>
<td>UE</td>
<td>857</td>
<td>779</td>
<td>456</td>
<td>164</td>
</tr>
<tr>
<td>ActewAGL</td>
<td>770</td>
<td>700</td>
<td>321</td>
<td>64</td>
</tr>
<tr>
<td>Tasnetworks</td>
<td>1,242</td>
<td>1,129</td>
<td>535</td>
<td>184</td>
</tr>
<tr>
<td>EnergeX</td>
<td>1,058</td>
<td>962</td>
<td>459</td>
<td>206</td>
</tr>
<tr>
<td>Ausgrid</td>
<td>1,026</td>
<td>933</td>
<td>382</td>
<td>124</td>
</tr>
<tr>
<td>Endeavour</td>
<td>994</td>
<td>904</td>
<td>406</td>
<td>149</td>
</tr>
<tr>
<td>SAPN</td>
<td>1,298</td>
<td>1,180</td>
<td>733</td>
<td>351</td>
</tr>
</tbody>
</table>

^ Based on solar market offers available post July 2017 (including guaranteed and pay on time discounts) offered by the same retailers included in chart 2 above.

^^NUOS charges applied to quarterly import rates of: 892 kWh in Vic, 893 kWh in ACT, SA and Queensland, 894 kWh in NSW, and 1033 kWh in Tasmania.

^^^Wholesale cost of $82/MWh in Vic, $72/MWh in NSW and ACT, $71/MWh in Qld, $85/MWh in Tasmania and $107/MWh in SA applied to the above import rates.

** 2.19 c/kWh in Qld, 3.39 c/kWh in ACT, 2.88 c/kWh in NSW, 2.68 c/kWh in SA, 1.75 c/kWh in Vic, 1.20 c/kWh in Tasmania applied to the above import rates.

***Based on AER estimated AMI charges for 2017

39 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.

40 The “green scheme” costs include Renewable Energy Targets, Feed in Tariffs and other jurisdictional schemes. The AEMC report, 2016 Residential Electricity Price Trends (December 2016) estimated the cost of environmental policies for each jurisdiction and costs used for this report are based on the cost of environmental policies (c/kWh) in 2017/18 multiplied by 6 MW.

41 To estimate the impact of the Victorian smart meter rollout on the bill-stack, we used AER’s indicative average annual metering bill for 2017. See table 1-2 in AER, Advanced Metering Infrastructure, Transition charges applications, Final Decision (December 2016)
6. Observations and recommendations

This final section highlights some of the issues identified in this report and proposes recommendations for how they can be addressed. While we have previously identified and discussed some of these issues, the focus this year is on price dispersion, product differentiation and what is needed to ensure consumer benefit.

6.1 Price dispersion

Price dispersion occurs between jurisdictions, networks, customer classes and retail offers. This section looks at issues relating to price dispersion between customer classes, solar versus non-solar customers, as well as price dispersion in the retail market.

6.1.1 Price dispersion between classes of consumers

Table 3 in section 2 above showed that the annual retail component of market offer bills for non-solar customers (using 6,000 kWh per annum) is between $180 - $580 (depending on jurisdiction/network area). By comparison, table 6 in section 5, showed that the retail component for solar customers varied from negative (below cost) to $250 per annum.

Households that invest in solar systems (and batteries) should of course receive differential electricity bills compared to those who do not. However, in an environment with ongoing increases to electricity prices, the take-up of solar and batteries will in all likelihood continue to increase and the impact this may have on those who cannot invest in such measures therefore require serious consideration.

Issues that must be addressed include: What is a reasonable return on investments such as roof-top solar and batteries? Who should determine the size of the feed-in tariffs offered? What criteria should be used to determine feed-in tariffs? Do only direct users of the grid pay or will we need a “grid levy” paid by all? The user-pay principle and minimisation of cross-subsidies have been key energy policy objectives in recent years. Expensive network upgrades have been blamed on those driving up peak demand due to use of air conditioners, and consequently being subsidised by (the presumably less affluent) that do not have air conditioning. The user-pays principle may seem straight forward as long as we are all users (consumers). With the rise of the prosumer, however, the cost for the increasingly fewer consumers may become too high.

We stress that this is a bill breakdown only and does not take into account retailers’ revenue from each customer type. The energy exported by solar customers does, for example, have a value to the retailers.

42 We stress that this is a bill breakdown only and does not take into account retailers’ revenue from each customer type. The energy exported by solar customers does, for example, have a value to the retailers.

43 Due to up-front cost, housing tenure or housing type
In our view, we need to have a national debate and agreement around the cost allocation and consumer protection framework related to these issues. Energy policy is already heavily politicised in Australia and unless we have a shared understanding of what costs we should be able to reduce as individual households and what costs are required in order to supply our community, this area is likely to become even more politicised in the future.

Piecemeal approaches and election motivated policy announcements are unlikely to deliver long term benefits for consumers. As such national agreement and approach to address the impact of increasingly common technologies, such as rooftop solar and battery storage, and a shared policy vision for how costs and benefits should be shared and/or distributed across the community is critical. In addition, state governments must commit to review and reform their own assistance measures, such as concessions, to ensure that public policy intent is tailored and targeted to deliver assistance where most needed.

6.1.2 Retail price dispersion

Section 4 above highlighted the significant price-spread between market offers in competitive markets. This price dispersion in itself is not necessarily bad. The negative impact of this price dispersion occurs when consumers are unable to identify better offers and therefore pay more than necessary.

The Prime Minister recently responded to concerns that many customers pay more than necessary because they had been shifted back on to a standing offer price after their market contract had lapsed. Some retailers have now agreed to write to these customers to inform them that they are not on the best offer available and how they can address this.

Not all retailers place a customer on their standing offer rates when their contract (or “benefit term”) expires. However, the fact that some do is reason enough to intervene. The main question to be asked is why it is up to retailers to determine what should happen to a customer when a contract/benefit term expires in the first place. Retailers are already permitted to change the rates and/or the discounts offered at any time during the contract. As such, there is no risk the retailer could end up with customers on prices that it cannot afford to offer. As raised in the recent update report on the Victorian Tariff-Tracking project, there will always be companies that seek to “push the boundaries” and a reasonable regulatory framework, with appropriate enforcement mechanisms, must therefore be seen as necessary and important in markets providing an essential service.44

Energy markets are rapidly evolving and it should be acknowledged that it is difficult to get the frameworks “right” in a dynamic market. While a considerable amount of work went into designing and establishing a National Energy Customer Framework

(NECF) there are reasons to believe that it is not delivering as well as intended. The NECF was created to support the delivery of a national and efficient energy market as set out in the Australian Energy Market Agreement (AEMA). In turn, the first objective of the AEMA is “the promotion of the long term interests of consumers with regard to the price, quality and reliability of electricity and gas services”.

In our view, the NECF is currently too reliant on effective competition to deliver market discipline. A NECF where the guiding first principle is consumer protection rather than market (product) innovation and reliance upon effective competition and customers providing ‘explicit informed consent’, may be more effective in promoting the long term interests of consumers.

We also stress the value of a national approach. The current ACCC inquiry into Retail Electricity Pricing is likely to offer significant insight into issues facing the energy retail market, as well as measures to address these issues. We have also had the recent Independent Review into the Electricity and Gas Retail Markets in Victoria that highlighted many of the same issues as the ACCC in its preliminary report, but it remains to be seen whether the ACCC recommendations will be similar to that of the Victorian review. As such, we recommend the Victorian Government await the completion of the ACCC inquiry before it commits to implement significant recommendations and changes to the Victorian electricity retail market.

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6.2 Product differentiation

Consumers are likely to understand sensible product differentiation where the bill can be lower if you agree to certain conditions that provide benefits to retailers.

**Figure 1** A basic illustration of sensible product differentiation

![Diagram of product differentiation with Bill on the Y-axis and Conditions on the X-axis. The diagram shows the relationship between bill and conditions with pay on time discount, direct debit discount, and online product and direct debit discount.

Many retailers currently structure their offers similar to that outlined in figure 1. However, some retailers have offers that are virtually the same (apart from the name) or offers where a discount conditional upon paying on time actually is more expensive than an offer that does not have this condition.

In the recent update report on the Victorian Tariff-Tracking project we highlighted an analysis of Click Energy's offers. Two identical offers in terms of the conditions applied produced annual bills with a difference of nearly $540 (based on households using 4,800 per annum). Many retailers have multiple offers available to consumers to choose between and while this can be of benefits to consumers, offers that do not contain meaningful aspects of differentiation merely become additional ‘noise’ in an already complex market. Allowing for this type of differentiation has made the market impossible to navigate for many consumers. It has also made it very difficult to develop tools that can help customers compare.

We agree that there should be opportunities for retailers to innovate but as evidence to date shows that some retailers use this opportunity to ‘bombard’ the market with multiple offers of very little distinction, we also believe that some regulatory oversight is required.

We therefore recommend the establishment of a regulatory function that monitors retail products and product innovation. While it should encourage meaningful product innovation, it should also have a ‘zero tolerance policy’ when it comes to multiple products from the same retailer that are lacking meaningful differentiation. This regulatory oversight should be able to remove retail products developed to confuse, or even trick, customers.

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In our view, this regulatory function needs to be in place until there is a common understanding amongst consumers of what an energy contract will deliver, how various products are different and what the associated value propositions are.

6.3 What customers need

Energy consumers need a retail market characterised by sensible product differentiation and access to tools that can distinguish, sort and identify suitable offers.

While we agree that it can be difficult to compare discounts when the base rates vary, this can at least be done through a simple calculation (by a comparison site). However, when multiple offers produce the ‘same bills’ and consumers are required to examine the fine print section of an offer, comparison sites lose their usefulness.

The AER is currently conducting a review into Customer Price Information and the Issues Paper states:

“A range of evidence indicates a link between the information customers receive about, and understanding they have of, energy services, and low levels of customer engagement in the retail energy market. Many customers, for instance, feel overwhelmed and confused by the range of energy plans available, and perceive that scanning the market and comparing offers is time-consuming and difficult.

Importantly, it is not necessarily the case that customers feel they do not have enough information, but rather that the information is not provided in such a way that it can be easily understood or applied to a customer’s circumstance. This may be due to the language, challenges being able to compare ‘apples with apples’ and the different conditions on requirements that must be satisfied in order to get the full benefit of a specific offer.”

We agree that these are issues facing consumers, and impacting market outcomes more broadly, but we stress that information alone will not solve these problems. While we welcome this review because the information provided to consumers needs to be improved, we recommend that the AER take a broad approach and assess whether information about a specific feature of an offer is the best method in the first place.

For example, retailers can currently determine how many days a customer has to pay a bill. As many retailers offer significant pay on time discounts, and many charge late payment fees, this is arguably a feature customers should be aware of when

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50 Market offers only.
comparing offers. Currently, Fact sheets or Product Information Statements, do not contain this information. However, rather than simply adding information about yet another feature, the first question should be: Is it important that retailers can determine how many days the customer has to pay a bill? In our view, the answer is no. When offering regulated and/or standing offers, retailers are required to give customers a minimum number of days to pay their bills. This requirement is based upon fortnightly pay-cycles and the recognition that many customers (and especially those on low and fixed incomes) need to receive two pay cheques between receiving an energy bill and paying it.

By applying the same requirement to market offers, the need to inform customers about this will disappear. The flip side, of course, is that retailers will not be able to innovate around this aspect. Innovation and product differentiation are positive aspects of a market, however the test should be whether the benefit from innovation around one aspect is greater than the benefit from not having to inform consumers about it. To put it bluntly, is it important that a retailer can require a customer to pay within five days? And, if they do not, forego large pay on time discounts and be charged a late payment fee?

Another example relates to the pass through of network charges. Currently the Fact Sheets contain a lot of information about network charges such as connection, disconnection and reconnection charges. The provision of this information is confusing, to say the least. There does not seem to be a common understanding of what these charges are or when they actually apply. If these charges are network charges only, they should be the same for all customers, irrespective of the retailer, in one network area. However, the retailers are allowed to charge a reasonable administration fee for passing on these charges and as such, the final charge may vary from retailer to retailer. Again, the question ought to be: Is it important that a retailer can charge a reasonable administration fee for passing on network charges to a customer? In our view, the answer is no. Retailers already take retail costs into account when setting their prices so they already have the opportunity to recover these costs.

We therefore recommend a two-step process: Firstly, minimise the possibility of confusion (through regulatory provisions) and, secondly, ensure that product comparison sites are adequately resourced and that the awareness and uptake of these tools increases.

6.4 Recommendations

1) A policy review about the distribution of costs and benefits from roof top solar and battery storage and other consumer choices be initiated
A national approach should be considered to address the impact of increasingly common technologies, such as roof top solar and battery storage, and a policy vision for how costs and benefits should be shared and/or distributed across the community. In addition, state governments should commit to reviewing their own assistance measures, such as concessions, to ensure that measures are tailored and targeted to deliver assistance where most needed.
2) A revised National Energy Customer Framework
The development of a revised National Energy Customer Framework where the guiding first principle is consumer protection, rather than market (product) innovation and reliance upon effective competition and customers providing ‘explicit informed consent’. This should be an agreed national approach inclusive of states and territories.

3) Regulatory oversight in relation to product innovation and offerings
The establishment of a regulatory function that monitors retail products and product innovation. While it should encourage meaningful product innovation, it should also have a ‘zero tolerance policy’ when it comes to multiple products from the same retailer lacking meaningful differentiation. This regulatory oversight should be able to remove retail products developed to confuse, or even trick, customers.

4) Consumer information and comparison sites
A two-step process: Firstly, minimise the possibility of confusion (through regulatory provisions) and, secondly, ensure that government product comparison sites are adequately resourced and that the awareness and uptake of these tools increases.