Retail Offers and Market Transparency for New Solar Customers

May Mauseth Johnston
Alviss Consulting

June 2013

Disclaimer

The energy offers, tariffs and bill calculations presented in this report should be used as a general guide only and should not be relied upon. The information presented in this report is not provided as financial advice. While we have taken great care to ensure accuracy of the information provided in this report, it is only suitable for use as a research and advocacy tool. We do not accept any legal responsibility for errors or inaccuracies. Alviss Consulting Pty Ltd does not accept liability for any action taken based on the information provided in this report 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.

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Acknowledgments
This project was funded by a research grant from the Consumer Advocacy Panel (www.advocacypanel.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 the Consumer Advocacy Panel or the Australian Energy Market Commission.

I would like to thank Damien Moyse, Craig Memery and Dominic Eales at the Alternative Technology Association for their support of the project and input into the report.

May Mauseth Johnston
June 2013

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Foreword

The Alternative Technology Association (ATA) is delighted that such a study of current solar retail offers available to households in NSW, South Australia, Victoria and Queensland has been undertaken.

ATA is a national, not-for-profit organisation representing consumers and communities in the renewable energy, energy efficiency and water conservation marketplaces. The organisation currently provides service to approximately 5,500 members nationally, who are actively engaged with small, medium and large scale renewable energy projects, energy efficiency and the national electricity market.

ATA has been a long-standing advocate for Australian solar customers and we have produced advice on issues including project economics, grid-connection, appropriate policy frameworks and incentives, and details regarding supply chain costs and benefits of solar. Under the current trend of deregulation, retail market arrangements are becoming increasingly important to solar customers, as they try to navigate the complexity of the energy market. This report provides a timely and valuable insight into the retail offers available to new solar customers and the adequacy of the information available to them.

Apart from the broader issue of feed in tariff (FIT) rates and other incentives ignoring the supply chain benefits that distributed generation such as solar provides to all electricity consumers, this report also highlights that retailer funded FIT arrangements, whether mandatory or voluntary, have produced new, non-FIT related challenges for solar customers. Lack of market transparency and inadequate consumer information make it even more challenging for solar customers, compared to non-solar households, to navigate the retail market and identify the best offers available to them.

One possible interpretation of these findings is that solar customers have become a customer group with less political and regulatory appeal. Over a relatively short time span, this customer group has gone from being regarded as an important contribution to Australia's cleaner energy future, to one that is incorrectly associated with inappropriate subsidies and often blamed for rising energy costs – in particular by energy market participants that do not fully understand the dynamics of solar's role at the wholesale level. As such, solar customers appear to be a customer class, at least at a retail level, that has less rights and less access to information than other residential customers.

In response, ATA is deeply concerned about several aspects of the retail market for solar and recommend:

1. That nationally, a detailed review be undertaken to fully ascertain the costs and benefits (and in particular, the wholesale market benefits), to all consumers of an increasing capacity of solar PV in our energy markets.

2. That feed-in tariffs return to a mandated obligation on electricity retailers or distributors, based on the true value of solar generation to the electricity market as a whole.

3. That the true value of solar generation be captured through the implementation of the Australian Energy Market Operator's mechanism for *Small Generator Aggregators* to trade aggregated solar electricity directly into the wholesale market in order to ensure remuneration that is of fair and reasonable value.

The findings presented in this report show that the annual bill (including credits) can vary significantly from retail offer to retail offer within each jurisdiction. Depending on the jurisdiction (and network area) the difference between the best and the worst offer may be $150 to $300 per annum, based on customers in the capital cities having a 1.5kW system installed. However, it is not always the FIT rate itself that makes the offer good or bad. The importance of the FIT rate, as well as the difference between the best and the worst offer, differ between the four jurisdictions examined. There are thus several retail contract issues solar customers need to be aware of when choosing a retail offer, but the information available to new solar customers is inadequate.

In response to these findings the ATA makes the following recommendations:

1. That the Australian Energy Regulator reviews its approach to consumer information for new and potential solar customers. This study demonstrates that new or potential solar customers need to take a broad approach to their assessment of retail offers, an approach hindered by the current channelling of solar customers through narrow search criteria (i.e. 'solar offers') on consumer websites. As a starting point to address this issue the AER should develop 'fact sheets' for solar customers, similar to the shopping around fact sheet for other customers, in order to highlight that the FIT may be offered in "exchange" for higher consumption charges, supply charges or lower discounts.

2. That the AER and state based regulators ensure that retailers provide information about solar offers to the same standard they provide information about other retail offers. Easy access to price and product information statements is critical for any consumer that wishes to compare multiple retail offers. There is a general understanding that calling around to various retailers to obtain such information is too onerous for consumers and would thus have a negative impact on competition. To ensure competition is effective for solar customers, retailers must be required to publish solar offers as well.

3. That the AER undertake a review into the exclusionary nature of retail solar offers in the NEM. This review should consider the restricted range of retail

offers that are currently available to solar customers, as distinct from non-solar customers, and seek to implement a level playing field whereby the full range of all retail offers available to any non-solar customer are equally accessible to solar customers.

The ATA will endeavor to share this information with our colleagues and through our networks and look for opportunities to engage with policy makers and regulators on issues we believe are important, both for solar customers themselves, and for the energy market as a whole.

I wish to thank May Mauseth Johnston for her detailed analysis in undertaking and involving us in this study.

Damien Moyse
Energy Projects and Policy Manager, ATA

Introduction

There are almost 1 million households with solar PV panels (solar panels) installed in Australia.[1] It would be fair to assume that a large proportion of these households installed solar panels in response to government incentives such as rebates and mandated feed-in tariffs (FIT). More recently, however, governments have closed off or rolled-back their rebates and/or FIT arrangements, and in some jurisdictions retailers themselves now determine FIT rates and/or terms and conditions for solar offers. While the size of the FIT rate can be important, a separate, but arguably equally important issue relating to residential solar offers investigated in this report is: electricity retail market transparency and access to basic consumer information. Customers with solar panels need to navigate the retail market just like every other electricity customer, but market transparency and the information provided by retailers is much less clear regarding solar offers than non-solar offers.

The purpose of this project has thus been to analyse all aspects of the various retail offers available to new solar customers, both for 'feed-in' to the grid and for electricity consumption, in order to assess the impact various aspects of the retail offers have on annual bills. Furthermore, this project has assessed the adequacy of consumer information available to households searching for solar offers and the transparency around those aspects of the solar retail offers that can have material impact on households' electricity bills. The analysis covers the jurisdictions of South Australia, NSW, Victoria and Queensland, all of which currently have different solar/feed-in tariff (FIT) arrangements in place.

Table 1 Jurisdictional FIT arrangements

	Current FIT arrangements for new customers
SA	Mandatory distributor and retailer funded FIT
Qld	Mandatory distributor funded FIT
Vic	Mandatory retailer funded FIT (non-regulated terms and conditions)
NSW	Voluntary FIT only

Note: Some retailers offer additional voluntary FIT in Queensland and Victoria

The first part of this report examines annual bills for solar/FIT offers in the four jurisdictions to ascertain whether there are significant bill differences between the

[1] See Australian Clean Energy Regulator, Small Generation Unit (SGU) – Solar Panel (Deemed), Data as at 30/09/2012, Workbook downloaded from http://ret.cleanenergyregulator.gov.au/REC-Registry/Data-reports?retain=true&PagingModule=2106&pg=2 as well as Sydney Morning Herald, *Solar panel take-up warms to a million,* Peter Hannam 10/10/2012 *at* http://www.smh.com.au/business/carbon-economy/solar-panel-takeup-warms-to-a-million-20121010-27d7b.html and Sustainable Energy Association of Australia (SEA), *Australia keeps adding solar to homes*, Media Release, 9/10/2012 at http://www.seaaus.com.au/content/view/505/145/

retail offers, as well as to understand what components of the solar offer have the most significant impact on the bills. The second part of the report examines aspects pertaining to the 'import components' of the retail offers rather than the export components (FIT rates and annual credits). These 'import components' include rates for electricity purchased, supply charges as well as terms and conditions of the individual offers. The third, and final, part of this report focuses on market transparency, information sources and potential challenges for new solar customers when navigating the electricity retail market.

This project does not purport to cover all issues that may affect potential or new solar customers. We are aware that customers face issues in relation to choosing solar systems, installation, tariff type reassignment (e.g. to time of use tariffs) etc. However, the scope of this analysis is limited to analyse retail market offers available to new solar customers, retail market transparency and the adequacy of the consumer information available about these offers.

Methodology

To calculate the annual bills for the various solar market offers the following assumptions and methodology have been applied:

- A daily household consumption of 18kWh.
- Market offer discounts on the bill or the consumption charges, as well as any discounts conditional on bills being paid on time, have been included.[2]
- Both retailer funded FIT (voluntary and mandatory) and distributor funded FIT rates have been applied as per offers and/or regulations.
- For tariffs with controlled load, 30% of the total load has been allocated to the off-peak rate.
- For TOU tariffs, 20% of the load has been allocated to the peak rate, 30% to the off-peak rate and 50% to the shoulder rate.
- A flat annual consumption has been assumed but where the tariff is seasonal the rates have been applied proportionally (e.g. 3 month summer peak rates equals one quarterly bill).
- The annual bills have been based on quarterly bill calculations and all step increases have been applied as quarterly thresholds (including when the retail offer refers to daily or monthly thresholds). Daily fixed charges have been multiplied by 91 to calculate the quarterly amount.

[2] Pay on time discounts have as such been treated as 'bankable' discounts for the purpose of this analysis. Many households are unable to pay their bills on time and some of the annual bill calculations would thus be higher. As this study does not discuss issues pertaining to energy related hardship and the additional level of complexity assumptions about late vs. on time payments would bring to the bill calculations (such as accounting for late payment fees in some jurisdictions), we believe the assumption that all bills are paid on time is reasonable for the purpose of this analysis.

The generation capacity and export (to the grid) proportion for 1.5kW and 3kW systems used are presented in tables 2 and 3.[3] Appendix 1 contains the quarterly kWh allocated to the various bill calculations on the basis of these assumptions.

Table 2 Generation capacity and export (%) in capital cities

Capital cities	Annual generation per kW installed	Export rates (%)	
		1.5kW systems	3kW systems
Adelaide	1.680 MWh	22.1%	51.8%
Brisbane	1.736 MWh	24.6%	53.4%
Melbourne	1.539 MWh	14.9%	47.4%
Sydney	1.614 MWh	18.9%	49.9%

Table 3 Generation capacity and export (%) in non-capital cities

Non-capital areas	Annual generation per kW installed	Export rates (%)	
		1.5kW systems	3kW systems
South Australia	1.875 MWh	30.2%	56.8%
Queensland	1.857 MWh	29.5%	56.4%
Victoria	1.789 MWh	26.8%	54.8%
NSW	1.801 MWh	27.3%	55.1%

[3] This data was kindly provided by the Alternative Technology Association (ATA). Note that the estimated annual solar energy generation has a loss factor of 20% applied (includes temperature losses, soiling losses and wiring losses), the insolation is based on annual averages from the BOM over the years 1990 to 2008 (available at http://www.bom.gov.au/jsp/ncc/climate_averages/solar-exposure/index.jsp), and it is assumed that solar panels are mounted with a tilt equal to the latitude angle of the location (for non capital city areas these are Port Augusta, Longreach, Swan Hill and halfway between Dubbo and Bourke). The estimated export rates are based upon generation and export in NSW published in report prepared for NSW Industry and Investment by AECOM Australia, Solar bonus scheme, Forecast NSW PV Capacity and Tariff Payments, October 2010 available at http://www.trade.nsw.gov.au/__data/assets/pdf_file/0016/360142/AECOM-REPORT-for-Solar-Bonus-Scheme-Review.pdf

PART 1: Solar offers as annual bills and proportional FIT credits

The bill calculations for solar retail offers below are based on published market offers as of January and February 2013, and FIT arrangements in place for new customers post 1 January 2013.[4] The annual bill calculations are based on the retailers' Price and Product Information statements and the assumptions listed in the methodology section above. The analysis found that there are significant differences between the annual bills produced by the 'best' and the 'worst' market offers for solar customers in each of the four jurisdictions. Moreover, the analysis shows that it is not always the FIT rate itself that determines whether the offer is good or bad. The importance of the FIT rate, as well as the difference between the best and the worst offer, differ between the four jurisdictions.

Tables 4 and 5 below show the percentage difference to the annual bill between the best and the worst market offer for 1.5kW and 3kW systems in the four capital cities (table 4) and the non-capital city areas in each of the states (table 5).

Table 4 Difference in annual bill between best and worst solar market offer in the capital cities

		1.5kW system	3kW system
Adelaide	ETSA	23%	46%
Brisbane	Energex	15%	74%
Melbourne	Citipower	26%	31%
	Jemena	27%	31%
Sydney	AusGrid	16%	19%
	Endeavour	18%	19%
All bills based on the single rate tariff			

The significant bill differences for 3kW systems in Brisbane can be mostly attributed to one retailer that offers significantly higher FIT rates compared to the others. In Adelaide, where the FIT rates are the same, the greatest saving for this customer group comes down to the retailer's tariff shape. The retailer producing the lowest bill for this customer group has a higher consumption threshold for its inclining block tariff and no seasonal differences in its prices.

[4] Some retailers' Price and Product Information Statements and/or websites were unclear about whether offer was applicable to solar PV customers or not and have therefore not been included in this analysis. All discounts (non-conditional as well as those conditional upon bills being paid on time) have been included in the bill calculations. Other incentives such as a one off sign-up bonus, non-monetary benefits and discounts based on a direct debit payment method have not been included in the bill calculations.

Table 5 Difference in annual bill between best and worst solar market offer in the states (outside the capital cities)

		1.5kW system	3kW system
SA	ETSA	24%	62%
Qld	Energex	17%	94%
Vic	Powercor	31%	38%
	SP Ausnet	30%	37%
	United Energy	32%	38%
NSW	Essential	19%	20%

All bills based on the single rate tariff

Again the significant difference between bills for 3kW systems in Queensland can be explained by the higher FIT rates offered. Click Energy's FIT rates would result in a quarterly credit of approximately $140 while retailers' not offering a voluntary FIT produce a quarterly credit of just over $60 for this customer group.

The remainder of Part 1 analyses annual bills and FIT credits produced by individual retail market offers for new solar customers in each of the four jurisdictions.

Solar offers in South Australia

South Australia has both a distributor funded FIT of 16c and a regulated retailer funded FIT of 9.8c, and the annual credit for solar customers is thus greater in South Australia compared to the other states in this analysis. The size of additional discounts as well as tariff shapes (step increases and seasonal tariffs) are the factors that have the greatest impact on differences in annual bills for solar offers in SA. The South Australian analysis covers 15 solar retail offers (across 10 retailers) and charts 1 and 2 below show that there is an approximate $300 difference between the best and the worst market offer for single-rate solar customers with a 1.5kW system. For households with controlled off-peak, the difference is approximately $250. Note that the letters (A, B, C etc.) in the legend refer to individual retailers while the numbers refer to specific offers available from an individual retailer.

Chart 1 Adelaide 1.5kW systems, solar offers as estimated annual bills (incl. GST)

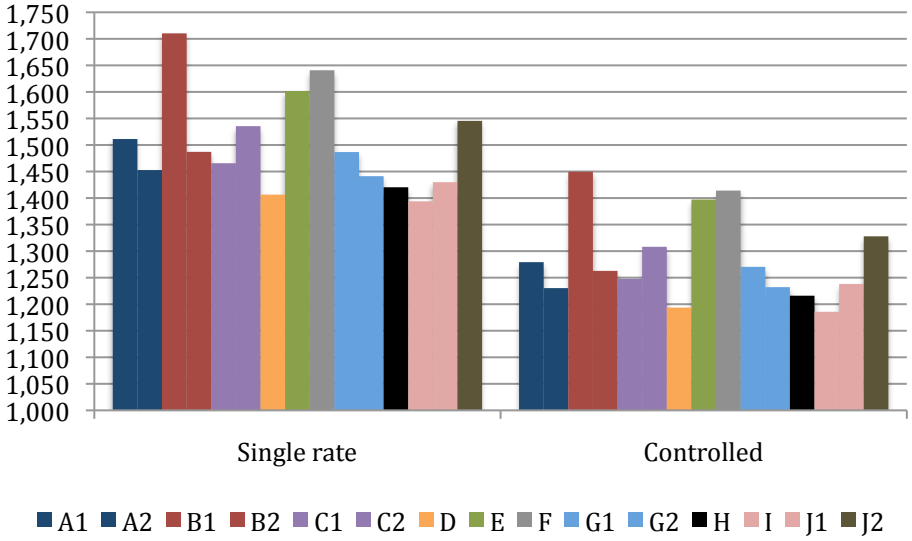


Chart 2 South Australia (non-Adelaide) 1.5kW systems, solar offers as estimated annual bills (incl. GST)

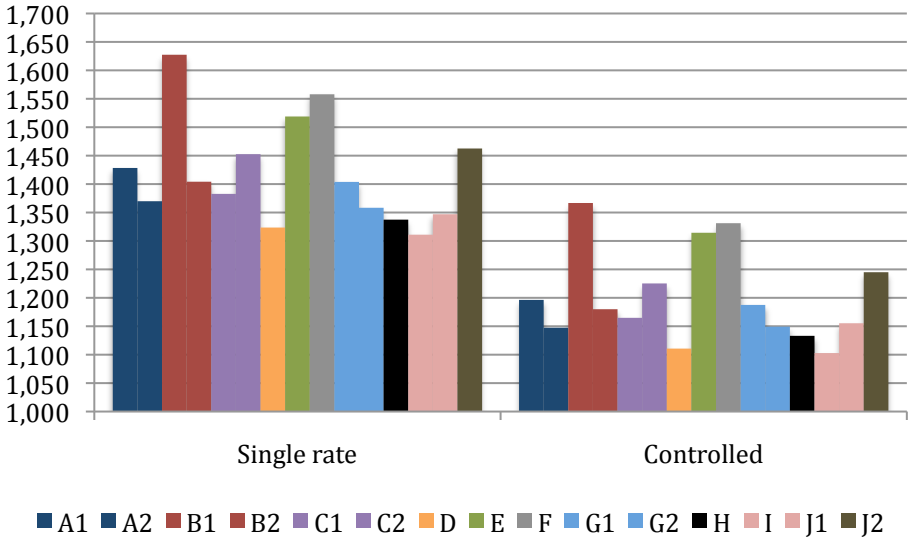


Chart 3 below shows estimated annual bills for each of the 15 retail offers, as well as the annual credit, for 1.5kW and 3kW systems in Adelaide.[5] Charts 3 and 4 both show that while the South Australian FIT rates offer sizeable credits, noting that the generation capacities are also comparatively high in South Australia, the FIT rate (annual credit) is extraneous when it comes to identifying the retail offer that produces the lowest annual bill for solar customers.

[5] The annual bill is the cost to the customer (excl. GST) after FIT credits have been applied

Chart 3 Adelaide, 1.5kW and 3kW systems, Annual bills and annual credits (single rate, excl. GST)

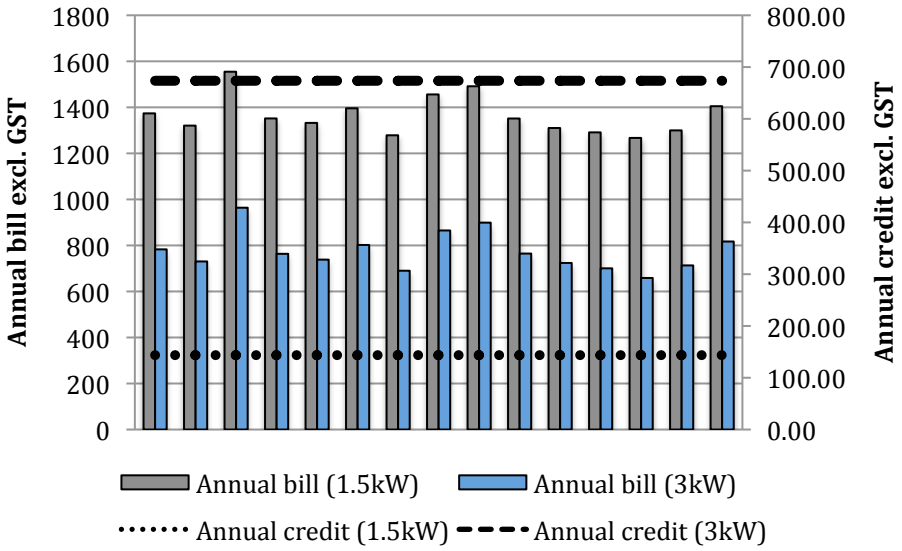
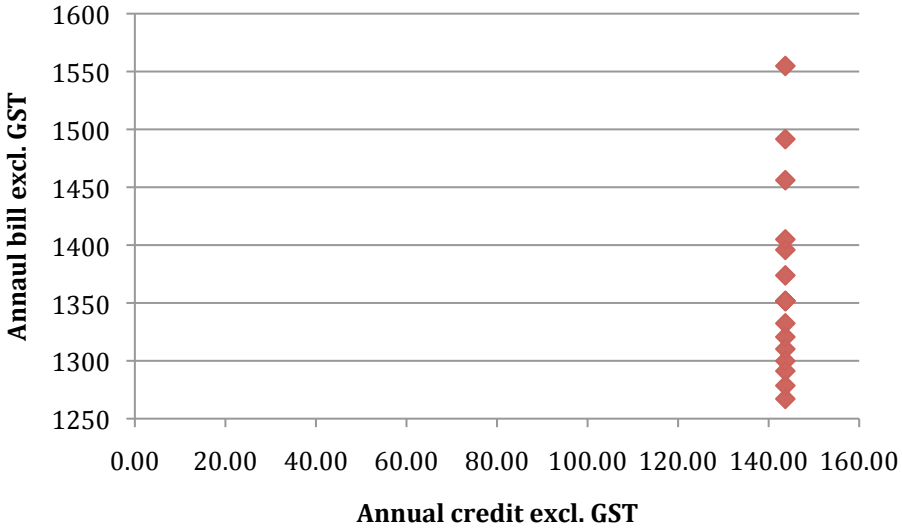


Chart 4 Adelaide, 1.5kW systems, Annual bills and annual credits (single rate, excl. GST)



Solar offers in Queensland

The Queensland analysis covers 11 solar retail offers, across 7 retailers, in the Energex network area. Retailers D and G (yellow and light blue in the charts below) do not offer a voluntary retailer FIT (only the mandatory 8c distributor funded FIT) while the other retailers do. Retailer E (green chart columns) offers the highest voluntary FIT rate. As the electricity generation capacity of PV systems in Brisbane is the highest of the four capital cities included in this analysis (and only South Australia is higher than Queensland for non-capital cities), the additional FIT rates offered by the retailers have significant impact on the annual bill for solar customers. Charts 5 and 6 below show estimated annual bills for households with 1.5kW systems in Brisbane and the rest of Queensland respectively. For households with a

1.5kW system on tariff 11 (the most common tariff type) there is an annual difference of $150-$175 between the best and the worst market offer. Charts 7 and 8 provide the same analysis for households with 3kW systems where the difference in the annual bill amounts to $380-$400 (tariff 11). Note that the letters (A, B, C etc.) in the chart legends refer to individual retailers while the numbers refer to specific offers available from an individual retailer.

Chart 5 Brisbane 1.5kW systems, solar offers as estimated annual bills (incl. GST)

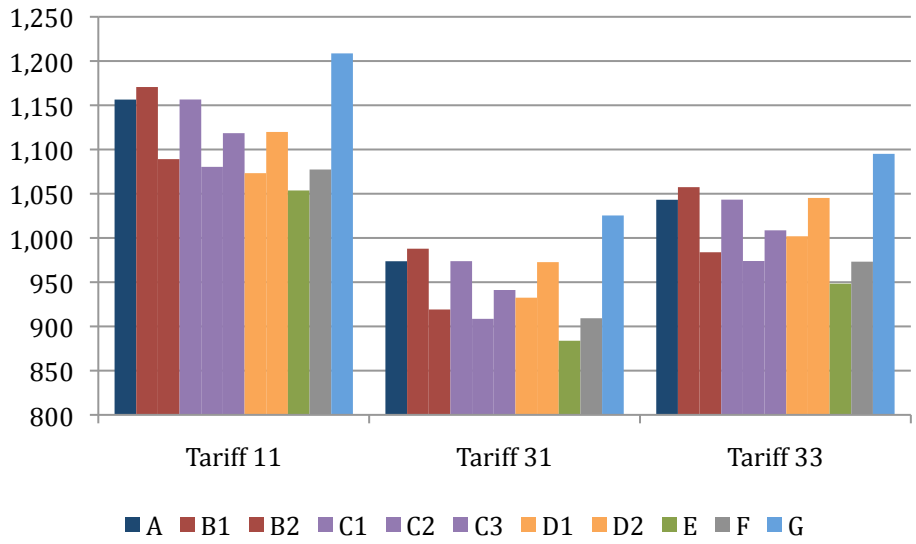


Chart 6 Queensland (non-Brisbane) 1.5kW systems, solar offers as estimated annual bills (incl. GST)

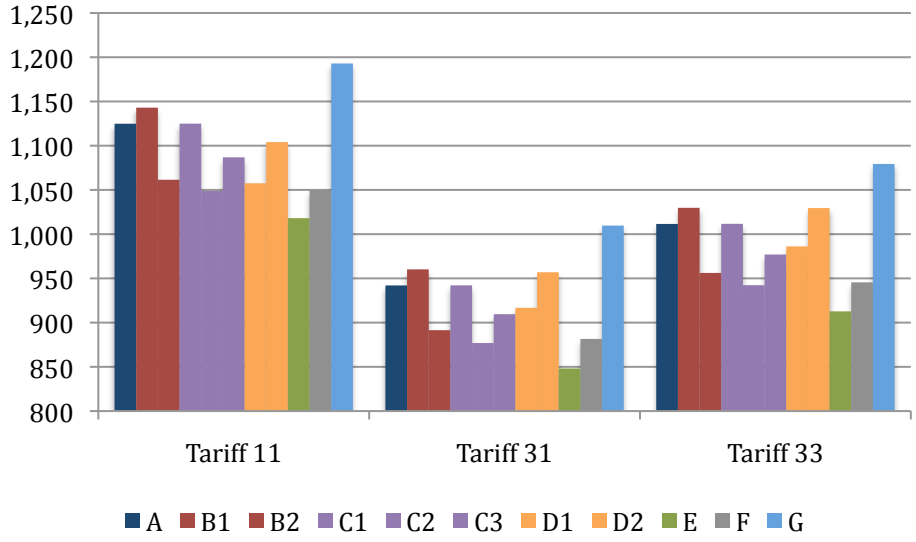


Chart 7 Brisbane 3kW systems, solar offers as estimated annual bills (incl. GST)

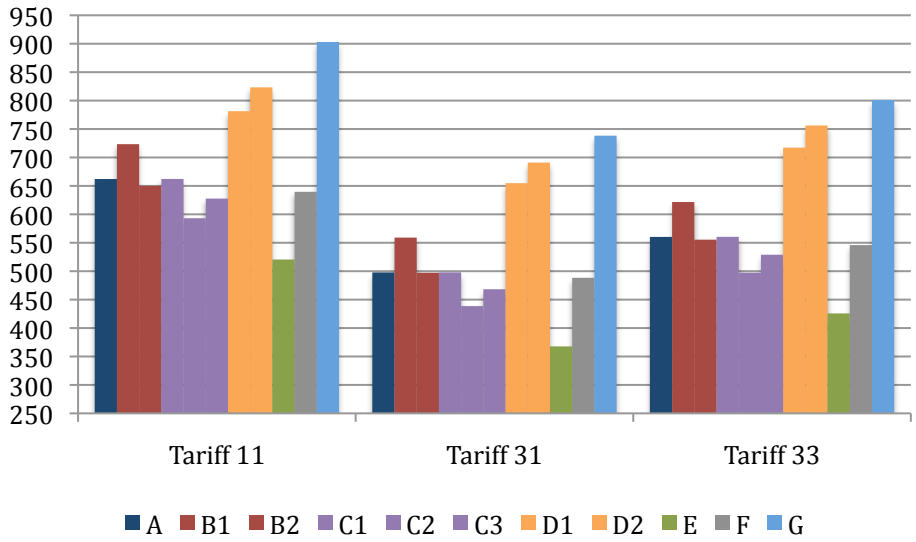
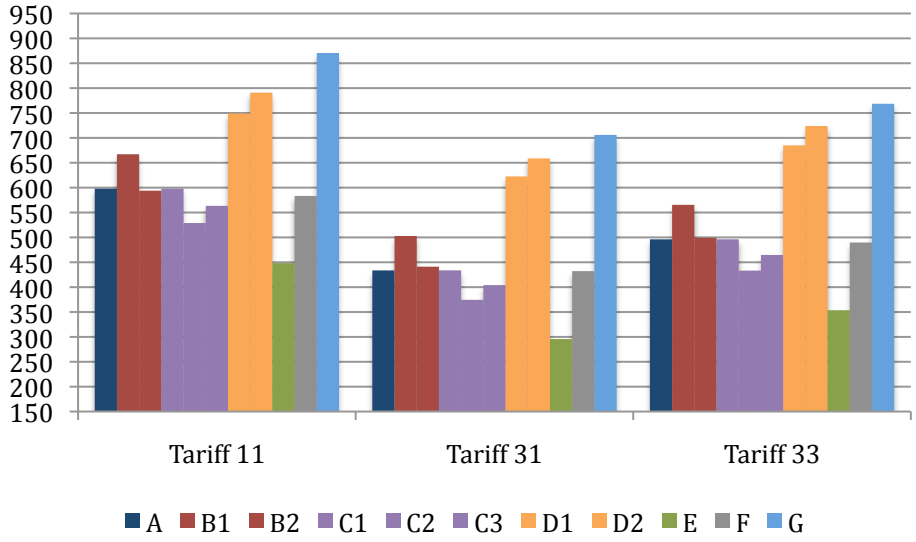


Chart 8 Queensland (non-Brisbane) 3kW systems, solar offers as estimated annual bills (incl. GST)



The voluntary additional FIT offered by some retailers has a clear impact on the annual bill in Queensland. Moreover, and as illustrated in chart 9, the size of the FIT rate has a stronger correlation to the size of the overall bill for 3kW systems compared to 1.5kW systems. The three retail offers with the lowest FIT rate produce the highest annual bills for 3kW systems (blue columns) while this is not the case for 1.5kW systems (grey columns). For 1.5kW systems, chart 10 shows more clearly that one of the retail offers with the lowest FIT rate (shown as annual credit) produces the greatest annual bill while the two other offers with low FIT rates produce annual bills in the middle of the range. The retail offer with the highest FIT rate, on the other hand, is also the offer that produces the lowest annual bill.

Chart 9 Brisbane, 1.5kW and 3kW systems, Annual bills and annual credits (single rate, excl. GST)[6]

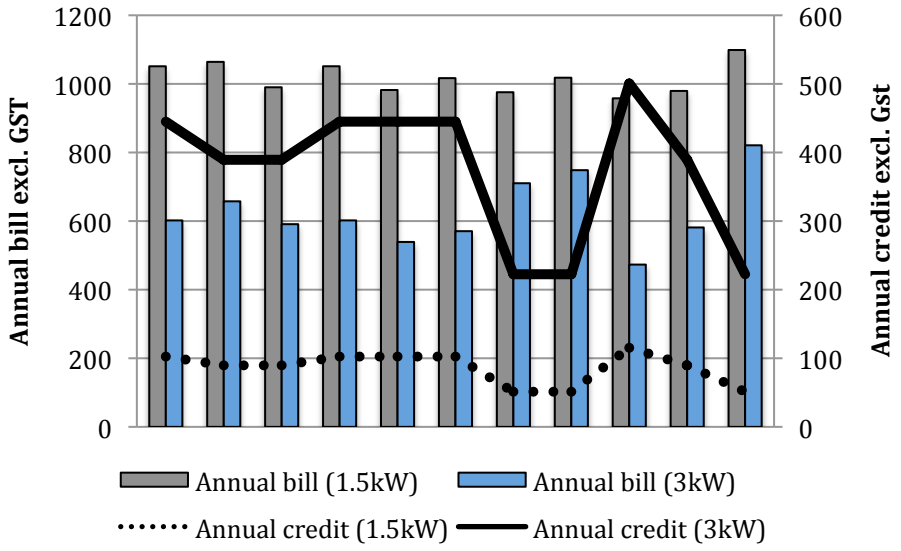
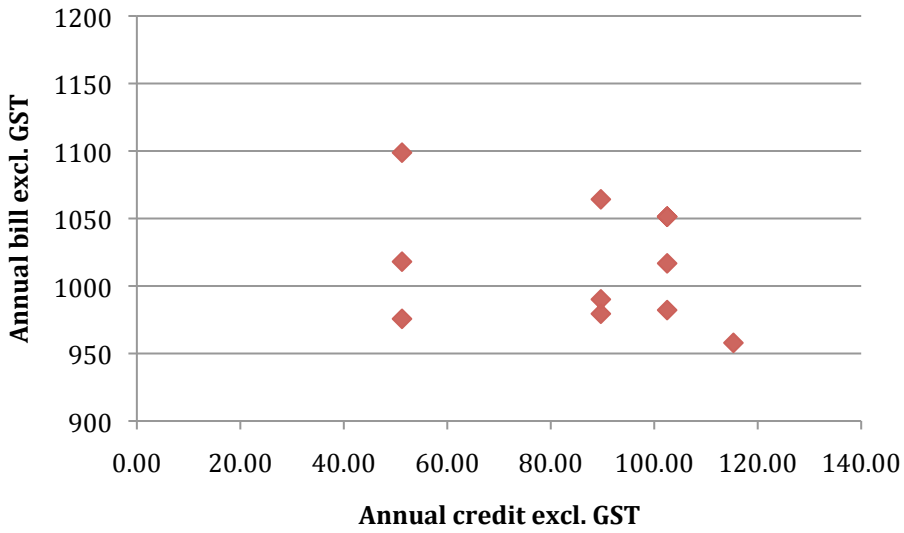


Chart 10 Brisbane, 1.5kW systems, Annual bills and annual credits (single rate, excl. GST)



Solar offers in Victoria

The Victorian analysis covers 14 solar retail offers, by 10 retailers, across five network areas (Citipower, Jemena, United Energy, Powercor and SP Ausnet). Victoria currently has a mandated retailer funded FIT rate of 8c and only one retailer offers a higher FIT than the mandated rate. However, as Victoria's deregulated energy retail market is characterised by retail differentiation in relation to tariff shapes (lower supply charge and higher consumption charges or vice versa) and the size of the additional discounts, these aspect of the contract will have greater impact on the annual bill than the FIT rates themselves (for households with 1.5 or 3kW systems). It is therefore important to note that it is just the 8c FIT rate that is

[6] The annual bill is the cost to the customer (excl. GST) after FIT credits have been applied

regulated and that the retailers themselves determine the terms and conditions of the solar offers. The analysis conducted for this report found that many of the retail products that contained high discounts were not available to solar customers and one retailer even had a significantly higher fixed supply charge for its solar offer compared to its non-solar offer. These issues, and the impact this has on consumer information needs and search costs, are discussed in more detail in Part 3 of this report. Chart 11 and 12 below show that there is approximately $300 difference in the annual bill (single rate) between the best and the worst of solar market offers for customers in Citipower's network area. In country Victoria, the difference can be as much as $400 between the different offers (charts 13 and 14 showing annual bills for households in Powercor's network area). Note that the letters (A, B, C etc.) in the chart legends refer to individual retailers while the numbers refer to specific offers available from an individual retailer. Similar charts for the other network areas are presented in Appendix 2.

Chart 11 Citipower, Melbourne 1.5kW systems, solar offers as estimated annual bills (incl. GST)

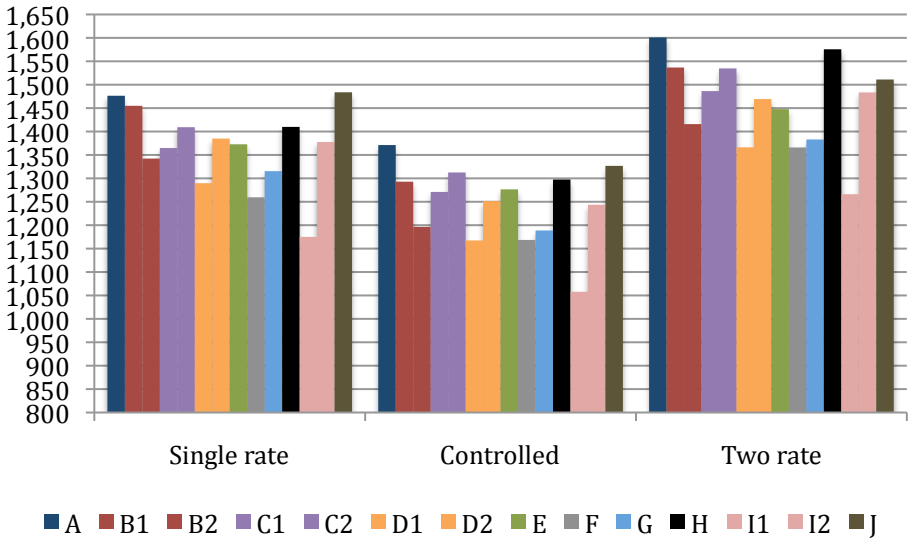


Chart 12 Citipower, Melbourne 3kW systems, solar offers as estimated annual bills (incl. GST)

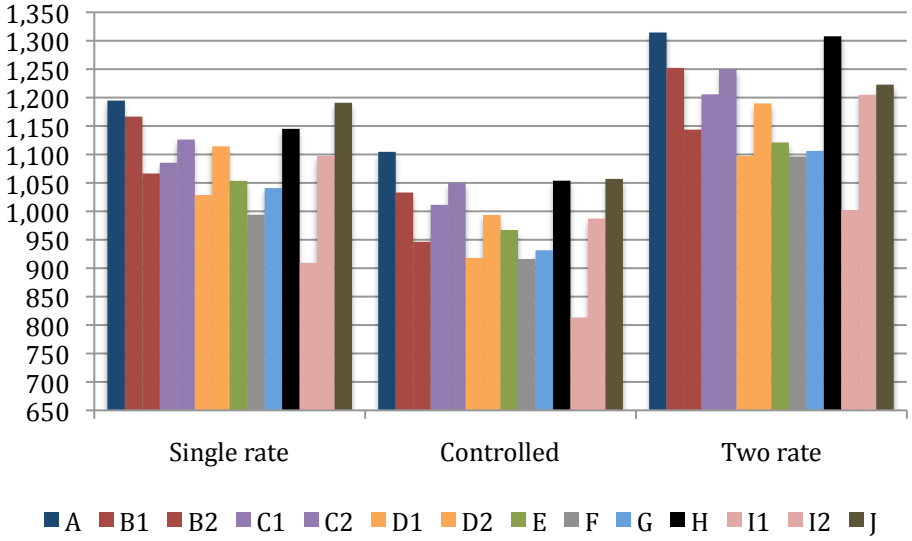


Chart 13 Powercor, Victoria, 1.5kW systems, solar offers as estimated annual bills (incl. GST)

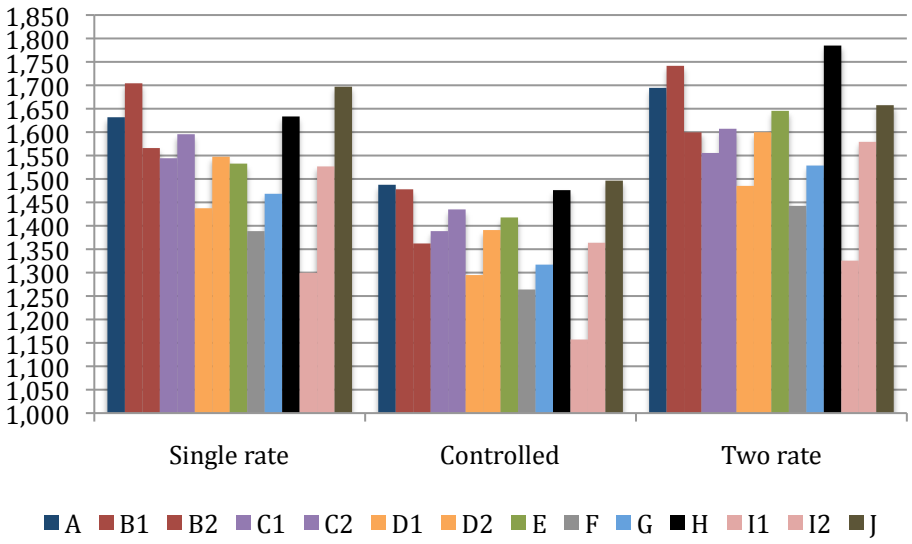


Chart 14 Powercor, Victoria, 3kW systems, solar offers as estimated annual bills (incl. GST)

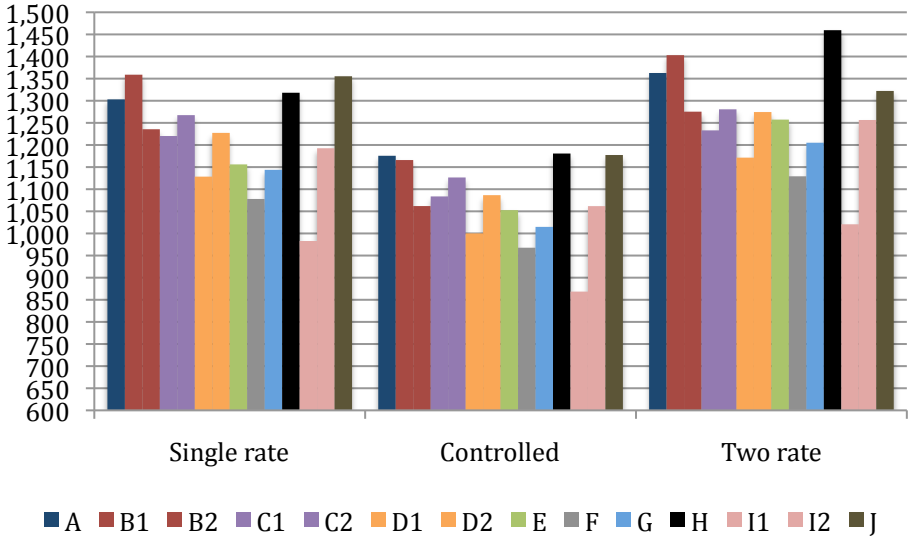
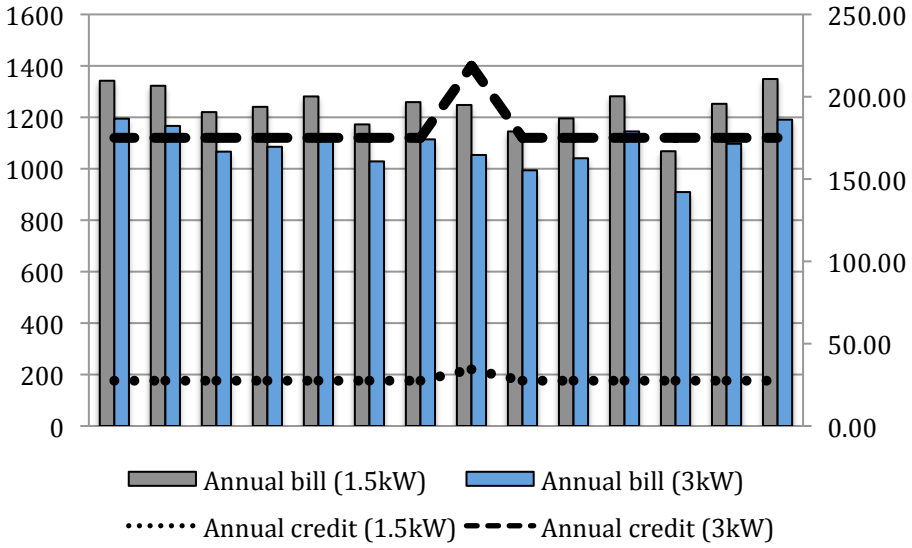


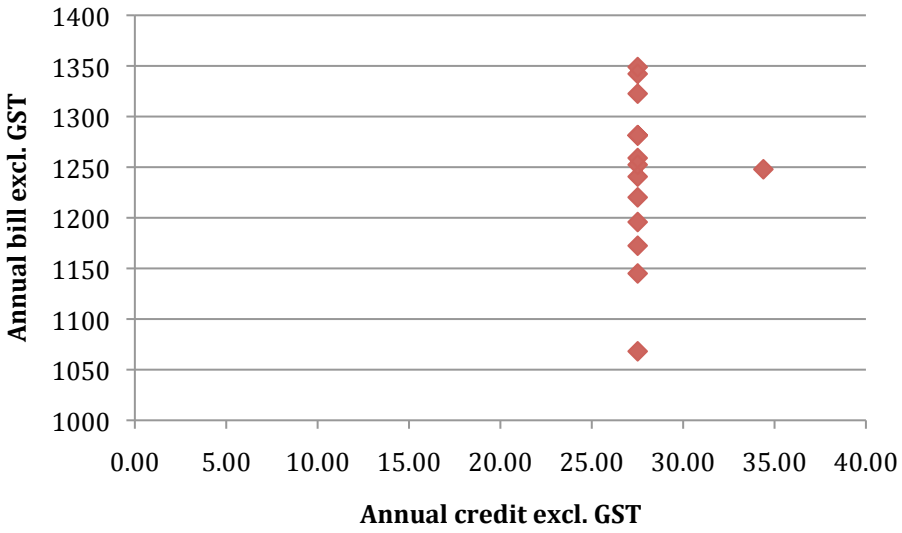
Chart 15 and 16 below show that the importance of the FIT rate (annual credit) is low compared to other aspects of the retail offers when it comes to identifying the retail offer that produces the lowest annual bill for solar customers (with 1.5kW and 3kW systems) in Melbourne.[7]

Chart 15 Melbourne (Citipower), 1.5kW and 3kW systems, Annual bills and annual credits (single rate, excl. GST)



[7] The annual bill is the cost to the customer (excl. GST) after FIT credits have been applied

Chart 16 Melbourne (Citipower), 1.5kW systems Annual bills and annual credits (single rate, excl. GST)



Solar offers in NSW

The NSW analysis covers 9 solar retail offers, by 6 retailers, across three network areas (Ausgrid, Endeavour and Essential). As NSW currently does not have a mandated FIT rate there are fewer retailers offering a FIT in NSW compared to the other states.[8] It should be noted, however, that retailers that do not offer FIT may still have competitive retail offers but as this analysis focuses on offers for solar customers only, retail offers with a FIT rate have been included in the analysis. The voluntary FIT rate offered by retailers in NSW varies from 5 to 8 cents. IPART's benchmark range for the FIT was 7.7 to 12.9c for 2012/13, but retailers who choose to offer a FIT keep it below or to the lower part of the recommended range.[9]

Chart 17 and 18 below show that there is approximately $200 difference to the annual bill (single rate) between the best and the worst of solar market offers for Sydney households (AusGrid's network area) with 1.5 or 3kW systems. For customers in rural NSW (Essential network area) the difference between the best and worst market offers for households with solar is over $300 (charts 19 and 20).[10] Note that the letters (A, B, C etc.) in the chart legends refer to individual retailers while the numbers refer to specific offers available from an individual retailer. Appendix 2 contains similar charts for the Endeavour network area.

[8] Note that retailers change conditions attached to new offers regularly and that this particular finding relates to offers available as of February 2013. For information about which NSW retailers that offer a voluntary retail funded FIT, or not, see IPART's website: http://www.myenergyoffers.nsw.gov.au/useful-information/solar-feed-in-tariffs.aspx

[9] IPART, Fact sheet, *Benchmark feed-in tariff range 2012/13*, 27 June 2012

[10] Note that these calculations are based on NSW generation assumptions, rather than Sydney assumptions

Chart 17 AusGrid, Sydney, 1.5kW systems, solar offers as estimated annual bills (incl. GST)

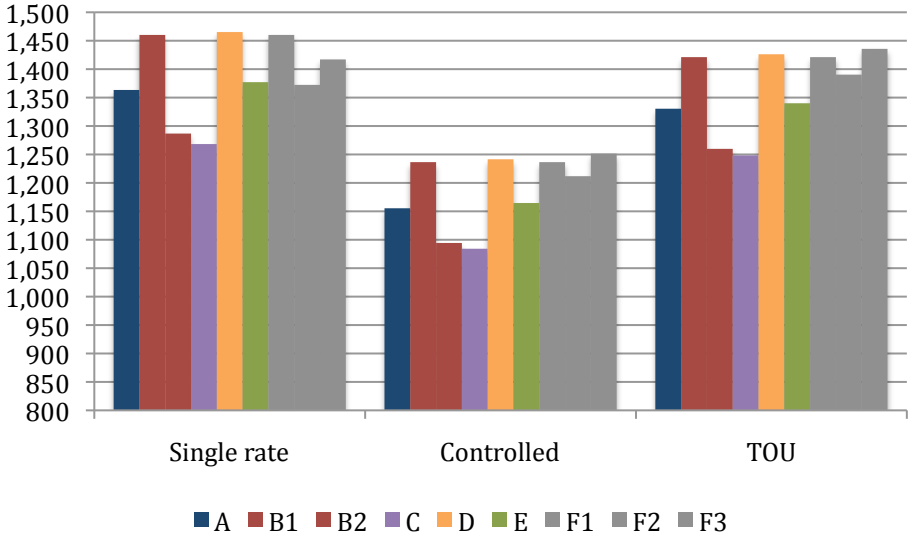


Chart 18 AusGrid, Sydney, 3kW systems, solar offers as estimated annual bills (incl. GST)

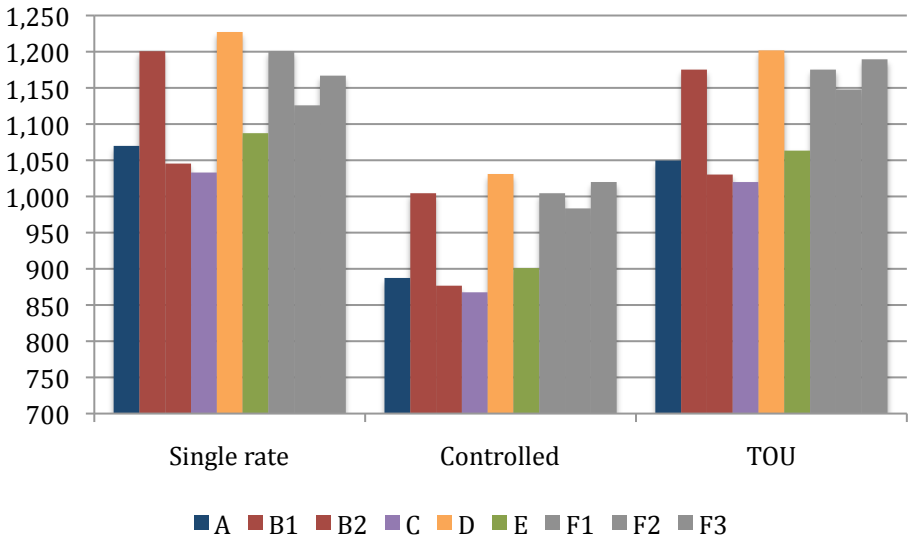


Chart 19 Essential, NSW, 1.5kW systems, solar offers as estimated annual bills (incl. GST)

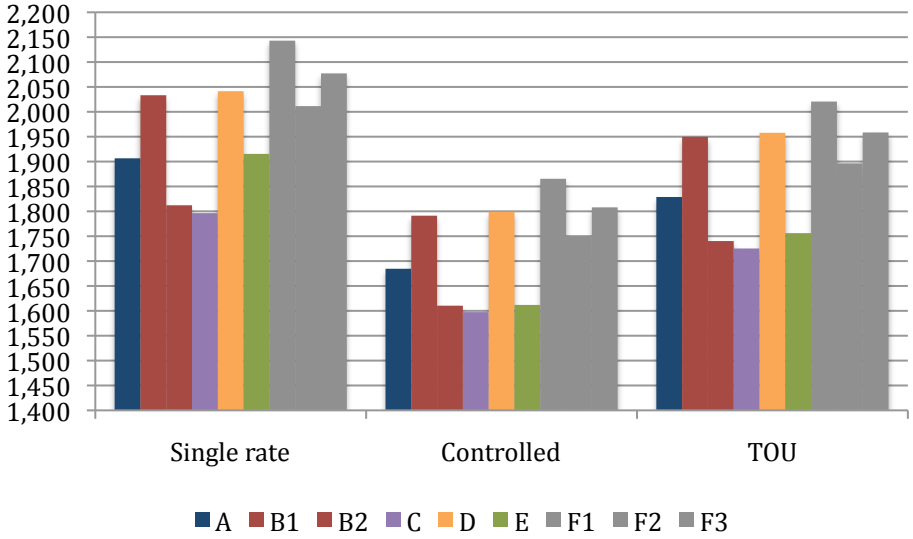
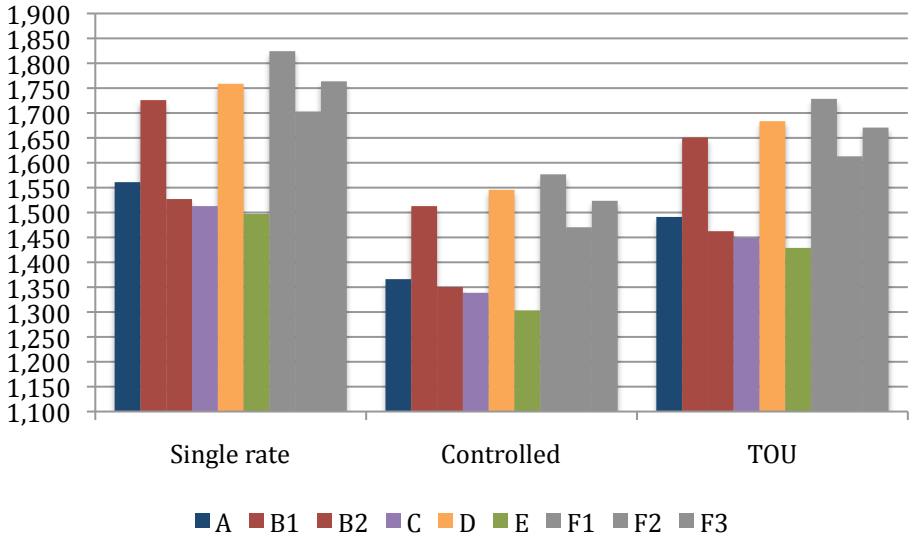


Chart 20 Essential, NSW, 3kW systems, solar offers as estimated annual bills (incl. GST)



As is the case in Queensland, the size of the FIT offered by the retailers is an important component to be assessed by customers comparing offers in NSW. Naturally, and as shown by chart 21, the size of the FIT rate has a stronger correlation to the size of the overall bill for 3kW systems compared to 1.5kW systems. Both chart 21 and 22 show that the retailer with the lowest FIT rate (shown as annual credit) produces the greatest annual bill. The two retailers with the highest FIT rates do not produce the lowest annual bills but are in the middle of the range.

Chart 21 Sydney, 1.5kW and 3kW systems, Annual bills and annual credits (single rate, excl. GST)[11]

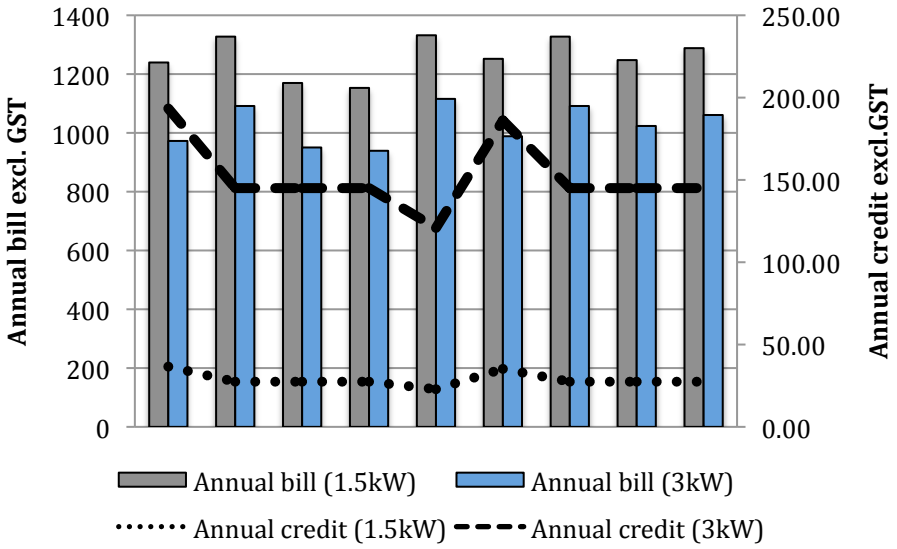
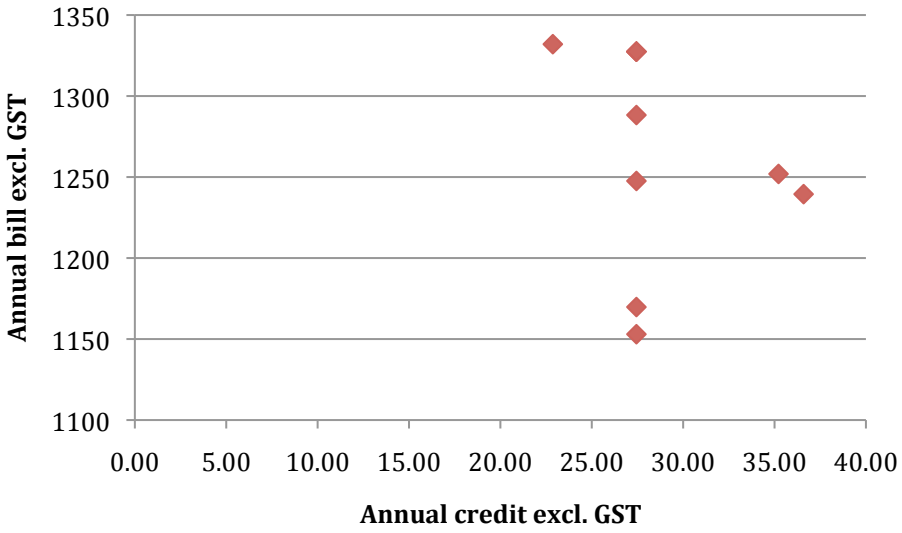


Chart 22 Sydney, 1.5kW systems, Annual bills and annual credits (single rate, excl. GST)



Summary

The above analysis shows that there are significant differences between and within jurisdictions when it comes to the annual credit solar customers can expect. This difference is caused by differences in FIT rates but also differences in generation capacities. Using the export rates identified earlier in this analysis, typical annual credits to the electricity bills that can be achieved by solar customers in the four capital cities are:

[11] The annual bill is the cost to the customer (excl. GST) after FIT credits have been applied

- Just over $140 per annum for 1.5kW systems and almost $700 for 3kW systems in Adelaide.
- Between $50 and $115 (depending on retail offer) for 1.5kW systems and between $200 and $500 for 3kW systems in Brisbane.
- Around $30 for 1.5kW systems and between $175 and $225 for 3kW systems in Melbourne.
- Between $20 and $40 for 1.5kW systems and between $120 and $195 for 3kW systems in Sydney.

Furthermore, the annual bill (including credits) can vary significantly from retail offer to retail offer within each jurisdiction. Depending on the jurisdiction (and network area) the difference between the best and the worst offer may be $150 to $300 per annum, based on customers in the capital cities having a 1.5kW system installed. However, it is not always the FIT rate itself that makes the offer good or bad. The importance of the FIT rate, as well as the difference between the best and the worst offer, differ between the four jurisdictions:

- In Adelaide the difference between the best and the worst offer is $300 per annum but the mandatory FIT rate (and hence annual credit) is the same across all retail offers.
- In Brisbane the difference between the worst and the best offer is $150 but here consumers need to assess the FIT rate as well as other aspects of the offers, as they vary significantly between retail offers.
- In Melbourne the difference between the worst and the best market offer is $300 and although there are slight variations to the FIT, consumers seeking financial benefits should focus on the other aspects of the offers.
- In Sydney the difference between the annual bills is $200 and here the FIT rates do vary and should be assessed together with the other aspects of the offers available.

Part 2: Terms and conditions of the solar offers

Part 1 of this analysis has shown that there are significant differences to the electricity bills between retailers, as well as a single retailer's offers, for households with solar panels. Furthermore, it found that for customers in jurisdictions with lower FIT rates (or deregulated FIT rates), and especially those with a lower capacity system (1.5kW) installed, aspects of the retail offer pertaining to the import of electricity has a greater impact on the annual bill than the export component (FIT rate). Part 2 of this report focuses on these other aspects of the retail offers that have material impact on solar customers' annual bills. These 'import components' include rates for electricity purchased, supply charges, as well as contract terms and conditions.

South Australia

In South Australia, where the FIT comprises both a mandatory distributor funded and mandatory retailer funded FIT (of 16 and 9.8c respectively), some retailers keep their most competitive offers (i.e. offers with greatest discounts) closed to solar-customers. However, as the generation capacity of solar PV systems is relatively high in South Australia, most solar customers would still be better off on the solar offers available compared to the non-solar offers (that attract greater discounts on consumption or bills). The main issue for solar customers in South Australia searching for the 'best deal' is thus the ability to access information about the various offers.

Queensland

In Queensland, retailers must offer the mandatory distributor funded FIT rate of 8c and some of the retailers offer an additional retail FIT. However, solar customers are not able to access all offers, such as the *AGL Select* offers, for example.[12] As in South Australia, the main challenge for solar customers in Queensland searching for the 'best deal' is thus the ability to access information about the various offers.

The Queensland Competition Authority (QCA) recently finalised its review into fair and reasonable solar FITs and concluded that: "[T]he market in South East Queensland is sufficiently competitive to support market determined, retailer funded feed-in tariffs which are fair and reasonable".[13] If the QCA's recommendations are adopted, issues arising for Queensland solar customers may be more similar to those identified for NSW and Victoria (below).

[12] It remains unclear whether retailers, such as AGL, would allow a customer with a solar system installed to access these "premium discounted" retail offers at all or whether they just do not qualify for the additional retail FIT rate. This issue is discussed in more detail in Part 3 below.

[13] QCA, *Estimating a Fair and Reasonable Solar Feed-in Tariff for Queensland*, Final Report, March 2013, p 43

Victoria

In Victoria, a minimum FIT rate of 8c was introduced from 1 January 2013 but retailers can vary all other components of their offers.[14] According to the Department of Primary Industries' website: "All electricity retailers with more than 5,000 customers must offer a minimum 8 cent feed-in tariff in 2013, but they may offer different packages and terms and conditions".[15] Searches on the various retailers' websites for market offers available to solar-customers (as of January 2013) found significant variation to the approach various retailers had taken to solar-offers as well as differences between individual retailers' solar versus non-solar offers. These searches found that some retailers did not offer additional discounts to solar customers, that some retailers offered lower discounts to solar customers compared to non-solar customers, and others applied higher supply charges to solar customers compared to non-solar customers.

- **Discounts not applying to the solar offer**
  Red Energy's *Living Energy Saver* offer for non-solar customers includes a 10% pay on time discount on the bill (supply charges as well as usage). Solar customers, however, do not receive this discount. According to Red Energy's website (as of January 2013): "Pay on Time™ discounts are not available to any Red Energy customers who choose to participate in a Red Energy solar plan."[16] A solar customer on Red's *Living Energy Saver* offer thus effectively receives 8c FIT instead of a 10% off the entire bill if paid on time.

- **Discounts being lower for the solar offer**
  More commonly a retailer will not offer the same discounts to solar customers that it does to non-solar customers. AGL's *Select* offers, for example, include as much as 12% off consumption charges, as well as a further 6% off if the bill is paid on time (*AGL Select 18*). Solar customers however, can only access *AGL Freedom 4,* which includes 4% off the consumption charges.

[14] Under the previous FIT arrangements, the Premium Feed in Tariff (PFiT) and the Transitional Feed in Tariff (TFiT), a major issue for solar customers was the automatic reassignment to TOU tariff by the networks that was then passed on by the retailers. With the move to a retail funded FIT arrangement only, these automatic network reassignments appear to have ceased. However, the issue of solar customers being forced on to a TOU tariff may reoccur when the moratorium on retail TOU tariffs is lifted in 2013. As regulation stipulates that the retailers can determine all terms and conditions of a solar offer as long as they offer a minimum FIT of 8 c/kWh, retailers may attach the FIT rate to TOU offers only.

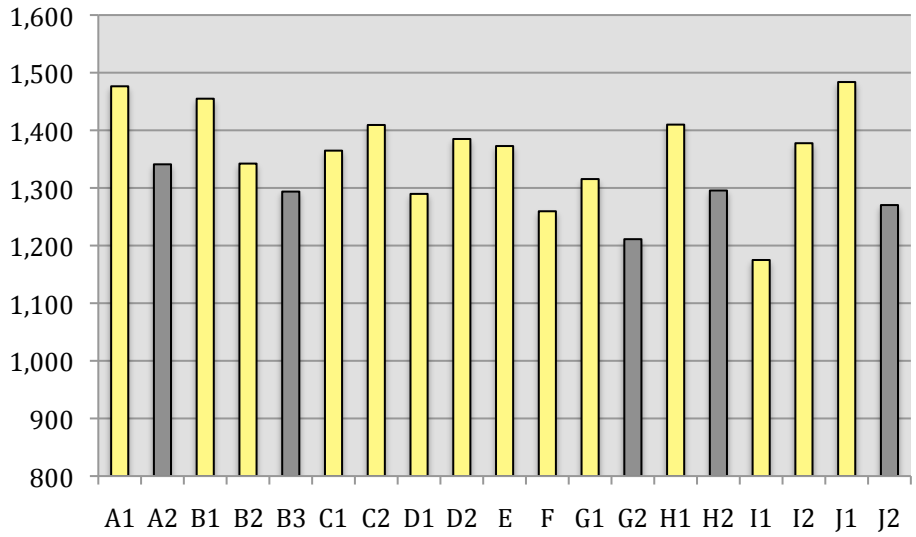
[15] http://www.dpi.vic.gov.au/energy/environment-and-community/victorian-feed-in-tariff-schemes/new-feed-in-tariff

[16] This statement was found on Red Energy's website http://www.redenergy.com.au/page.html?products-victoria on 22 January 2013 and it should be noted that Victorian retailers may change the price, as well as the terms and conditions, of a market offer at any time.

- **The fixed supply charge being higher for solar offers**
  Instead of lowering the discounts for solar customers a retailer can also increase the electricity rates and/or the daily supply charge. As the fixed daily supply charge is not affected by the avoided demand from the household's own generation capacity, a higher supply charge will have significant bill impact on solar customers. Simply Energy, for example, operates with a supply charge of almost 40 cents a day more for solar customers compared to non-solar customers (their *Simply Save* offers).[17] This additional supply charge cost amounts to over $140 per annum, which is almost the same amount a Melbourne household with a 3kW system can expect to earn from the 8c FIT rate over a year.

Chart 23 below compares Victorian market offers with FIT rates (yellow) to offers without FIT rates (grey) for customers in Melbourne (Citipower network) with a 1.5kW system installed.[18] The retail offer that produces the lowest annual bill is the offer labeled 'I1' and this offer does include a FIT rate. However, the chart clearly shows that many solar customers with 1.5kW systems in Melbourne could have lower annual bills if able to accept market offers without a FIT component.

Chart 23 Citipower, Melbourne 1.5kW systems, Market offer with FIT versus no FIT as annual bills (single rate, incl. GST)[19]



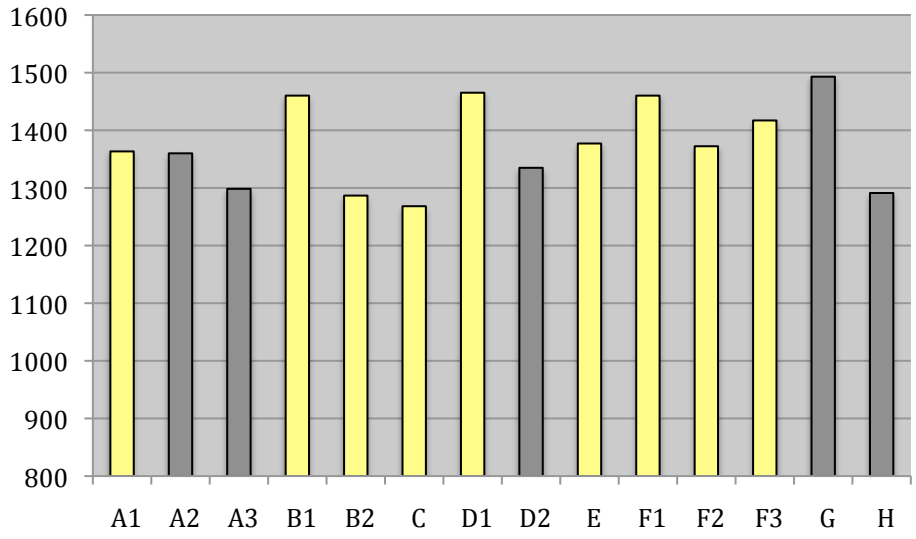
[17] Simply Energy's solar offers were found on the Essential Services Commission's energy comparison website (www.yourchoice.vic.gov.au)
[18] Note that the assumptions used for generation capacity has been included in the bill calculation for the non-FIT customers (grey columns) as well. It is only the FIT rate and the offers' terms and conditions that vary.
[19] Note that the letters (A, B, C etc.) in the chart refer to individual retailers while the numbers refer to specific offers available from an individual retailer.

New South Wales

The current FIT arrangements in NSW are based on a voluntary FIT rate offered by the retailers. As such, many retailers do not offer a FIT to customers with solar panels. Amongst those that do offer a voluntary FIT rate, the market offer terms and conditions may be different to the same retailers' offers to non-solar customers. This analysis did *not* uncover any solar retail offers containing higher rates compared to non-solar offers as in Victoria. However, as in Victoria, some of the market offer discounts available to non-solar customers were not available to customers receiving a voluntary FIT. Red Energy, for example, offers a voluntary FIT of 5c but customers accepting this will not be able to access the 10% pay on time discount available to other customers.

Chart 24 below compares NSW market offers with FIT rates (yellow) to offers without FIT rates (grey) for customers in Sydney (AusGrid network) with a 1.5kW system installed.[20] Retailer 'D' is Red Energy and the chart clearly illustrates that a 10% pay on time discount (offer 'D2') is of greater financial benefit than a 5c FIT rate (offer 'D1') for this customer group. As was the case in Victoria, the offer that produces the lowest annual bill includes a FIT rate (offer 'C') but there are also several FIT offers that produce higher annual bills than market offers without a FIT.

Chart 24 Ausgrid, Sydney 1.5kW systems, Market offer with FIT versus no FIT as annual bills (single rate, incl. GST)[21]



[20] Note that the assumptions used for generation capacity has been included in the bill calculation for the non-FIT customers (grey columns) as well. It is only the FIT rate and the offers' terms and conditions that vary.

[21] Note that the letters (A, B, C etc.) in the chart refer to individual retailers while the numbers refer to specific offers available from an individual retailer.

Part 3: Market transparency and information available to new solar customers

Part 1 examined the annual bills for solar offers on a whole and focused on the impact of the FIT rates. It found that there are significant differences to the annual bills produced by the various market offers and that the size of the FIT rate had less correlation to the 'ranking' of the annual bills in some jurisdictions compared to others. Part 2 focused on the "import component" of the solar offers in each of the four jurisdictions by examining the non-FIT components of the market offers. It is clear that the various "import components" of solar offers can be more important than the FIT rates themselves for households that seek to minimise their electricity bills. This aspect is especially relevant for jurisdictions with more deregulated FIT arrangements such as NSW and Victoria. The 3rd and final part of this report therefore examines market transparency as well as the availability and adequacy of consumer information.

As highlighted by IPART in their investigation into fair and reasonable FIT arrangements for NSW, the most significant financial benefit for new solar customers is that they receive lower bills due to buying less electricity.[22] However, this financial benefit can be significantly eroded if the cost of electricity or the supply charge is higher, or the additional discounts are lower, for solar compared to non-solar customers. New, and potential, solar customers need to be aware of these issues as well as the FIT rates. To ensure that deregulated retail markets for solar customers function and remain competitive over time, the regulatory instruments designed to address transparency and consumer information, must be adequate for solar customers as well. This is necessary to ensure that the market remains competitive, and should be considered separately to issues pertaining to incentives and the up-take of solar.

Information

Charts 23 and 24 (see part 2 above) clearly demonstrate that customers with solar PV systems (1.5kW) in Victoria and NSW would be financially better off on some market offers without receiving a FIT compared to some market offers that include a FIT. In the context of the retailers' Price and Product Information Statements, and general consumer information provided on their websites however, it is actually quite unclear what a solar customer is. Is a solar customer anyone generating electricity from solar PV panels? Or is a solar customer, from a retailer's point of view, someone that exports electricity generated and receives a FIT in return?

Amongst the few retailers that currently offer a voluntary FIT in NSW, AGL's most competitive offers, *AGL Select*, appear to be unavailable to solar customers and Red Energy does not offer its discount (10% off the bill for pay on time customers) to solar customers.[23] Red Energy does state that this applies to customers that *choose*

[22] IPART, *Solar feed-in tariffs, Setting a fair and reasonable value for electricity generated by small-scale solar PV units in NSW*, Final report, March 2012

[23] See, for example, http://www.redenergy.com.au/page.html?products-offers-parkinsons (note this offer is otherwise different to the Living Energy Saver product)

to participate in a Red Energy solar plan, while information about AGL's *Select* offers includes a pop-up box containing the following statement: "**Please note:** This electricity offer is not available to solar customers. Please call us … for details on our best available offers". The wording thus makes it unclear whether it is just customers that *choose* to receive Red Energy and AGL's voluntary FIT rates that are unable to access these offers or whether it applies to all customers with solar panels installed.

Solar customers, or potential solar customers, may simply be unaware that many electricity offers that contain a FIT rate are worse (higher rates or lower discounts) than non-solar offers. After all, there is no reason why a customer looking for a solar contract would necessarily be aware of this. Comparison sites such as the one offered by the AER ask users to tick a box to confirm that they are looking for solar offers prior to conducting the search. This approach may lead potential solar customers to overestimate the savings that can be made from installing solar panels (or renting/purchasing a home with panels installed), as the search does not show the value of the best market offers for non-solar customers. Of course a comparison site has to balance accuracy with usability and will in most cases be unable to offer all users all the information they potentially need. However, for the purpose of disciplining the market and enhanced transparency, it could be useful for the AER to investigate ways to inform potential solar customers about higher rates and/or lower discounts applied to some retailers' solar offers compared to non-solar offers.

Of the four jurisdictions included in this analysis it is only South Australian energy offers that appear on the AER's website, as the implementation of the National Energy Customer Framework (NECF) has been delayed in the other jurisdictions. However, as the framework is set to commence in NSW by 1 July 2013, the AER may wish to examine how the various jurisdictional FIT arrangements impact on consumer information needs. As discussed above, the NSW retail market for solar customers is more complex than that in South Australia, and new customers in NSW need to understand all aspects, not just the FIT rate offered, in order to make an informed decision.

NSW solar customers may already have experienced an information gap due to the delayed implementation of the NECF. As stated by IPART in their review into fair and reasonable FIT rates:

> "[I]n our view, the obligations in the Retail Price Disclosure Guideline and NSW Marketing Code of Conduct are not sufficiently clear or detailed with respect to feed-in tariffs. Given that the National Energy Customer Framework (NECF) is scheduled to commence on 1 July 2012, we do not support amending the NSW licence obligations".[24]

Similarly, the Queensland Competition Authority's (QCA) recent report stated:

[24] IPART, *Solar feed-in tariffs, Setting a fair and reasonable value for electricity generated by small-scale solar PV units in NSW*, Final report, March 2012, p 99

> "The Authority agrees with submissions highlighting the importance of enabling customers to make informed choices if they are to benefit from competition in the market for solar PV customers. Informed choice requires that customers not only understand the terms and conditions of a market offer they are considering, but also how that market offer compares to others in the marketplace.
>
> Current information requirements in the Electricity Industry Code (the Code) for non-solar PV customers provide the ability for customers to make informed choices and have supported the development of competition in the residential electricity market. These provisions could be extended to cover solar PV customers.
>
> The Authority notes that, as Queensland is currently committed to the implementation of the NECF. Should it be implemented, the NECF includes appropriate information disclosure requirements that cover solar PV feed-in tariffs".[25]

As an implementation date for the NECF to commence in Queensland has not yet been set, the QCA may wish to extend Code provisions to solar customers and include information about solar offers to its website comparator, should their recommendations for a voluntary FIT be adopted.[26]

Access to information

An online search for solar offers quickly reveals that it is more difficult to access relevant information about solar offers compared to non-solar offers. Potential customers looking for Price and Product Information Statements applicable to solar offers are in most instances requested to call the retailer or redirected to general web portals. Examples include:

- Australian Power and Gas's Victorian Price and Product Information statements simply contain the following line under the 'schedule of fees and charges' headline: "Feed-in tariff: For information about feed-in tariffs, please refer to australianpowerandgas.com.au."

- Simply Energy's website asks potential customers searching for offers by entering postcode: "Do you have solar panels or a feed in meter?" And if the box is ticked the following message is displayed: "**Important Notice:** At this stage, we cannot quote prices for your meter via our website, please contact our sales team on 13 88 08."

[25] QCA, *Estimating a Fair and Reasonable Solar Feed-in Tariff for Queensland*, Final Report, March 2013, p 55

[26] See http://www.aer.gov.au/retail-markets

- AGL's 'pop-up' message, mentioned above, that simply states: "This electricity offer is not available to solar customers" and requests the customer to call them instead.

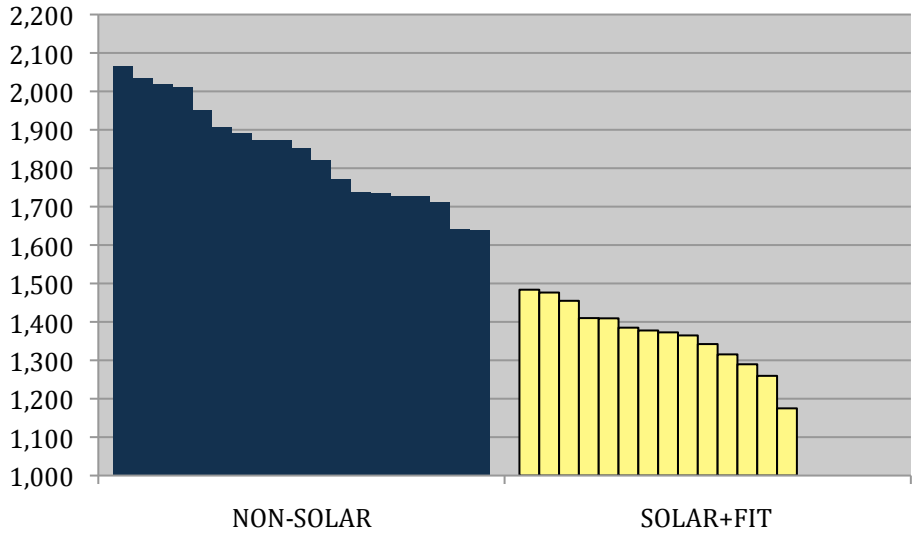
Non-solar customers are certainly not expected to call retailers individually to obtain information about their retail offers. With a significant number of retailers operating within the various electricity markets, the search costs for new solar customers interested in comparing offers to find the most suitable deal would be substantial. Over time, this could thus be detrimental to the effectiveness of competition in the solar retail market.

Conclusion

Clearly households with solar PV systems installed will need to purchase less energy in order cover their consumption needs. Based on market offers available to Melbourne customers in January 2013, for example, an average annual bill for households with a 1.5kW system and using 18kWh per day would be approximately $480 less than for non-solar households with the same consumption level.[27] Chart 25 below shows annual bills for Melbourne households (Citipower network, single rate) using 18kWh per day. The blue columns to the left show the annual bills various market offers produce for customers without solar panels while the yellow columns to the right show market offers (as annual bills) for households with a 1.5kW system installed. It shows that the annual bills for households with solar are much lower compared to households without solar and as such IPART is right in their statement about the main financial incentive for customers to install solar being avoided costs.

The important aspect to note for the purpose of this report however, it that the difference to the annual bill between the best market offer for non-solar customers and the worst market offer for solar customers is only $155. The difference between the worst market offer for non-solar customers and the best market offer for solar customers, on the other hand, is a significant $890 per annum. Furthermore, the difference between the best and the worst solar offer is approximately $300.

Chart 25 Non-solar market offers versus Solar offers as annual bills (Citipower, Melbourne 1.5kW systems, single rate, incl. GST)



This chart demonstrates why new, or potential, solar customers need to access information and comparison sites that go beyond listing the FIT rate. Moreover, the focus on the FIT rates when retailers can determine all other aspects of the offer

[27] Based on market offers (including conditional and non-conditional discounts) available in Citipower's network area for single rate customers.

may be counterproductive, both for the customer that makes the decision based on the FIT and for market development. Market transparency and well informed consumers are crucial to achieve well functioning deregulated markets. To date the solar market has been treated as an add on to the broader residential electricity retail market, with comparisons and information sources being the same as that for the non-solar market with some added information about the FIT. However, a growing and deregulated solar market will require more specific tools and information sources for customers than currently provided. The risk being that deregulation continues without appropriate levels of transparency and information, which may result in less competition and sub-optimal outcomes for the growing number of solar customers.

APPENDIX 1 – Assumptions and calculations

The assumptions outlined in the methodology section resulted in the following kWh allocations for the quarterly bill calculations:

Adelaide 1.5 kW systems:

Quarterly generation of 630 kWh
Quarterly export of 139 kWh
Quarterly import of 1147 kWh

- Thereof 344 kWh controlled off-peak for off-peak metering

Adelaide 3 kW systems:

Quarterly generation of 1260 kWh
Quarterly export of 653 kWh
Quarterly import of 1031 kWh

- Thereof 309 kWh controlled off-peak for off-peak metering

South Australia 1.5 kW systems:

Quarterly generation of 703 kWh
Quarterly export of 212 kWh
Quarterly import of 1147 kWh

- Thereof 344 kWh controlled off-peak for off-peak metering

South Australia 3 kW systems:

Quarterly generation of 1406 kWh
Quarterly export of 799 kWh
Quarterly import of 1031 kWh

- Thereof 309 kWh controlled off-peak for off-peak metering

Brisbane 1.5 kW systems:

Quarterly generation of 651 kWh
Quarterly export of 160 kWh
Quarterly import of 1147 kWh

- Thereof 344 kWh controlled off-peak for off-peak metering

Brisbane 3 kW systems:

Quarterly generation of 1302 kWh
Quarterly export of 695 kWh
Quarterly import of 1031 kWh

- Thereof 309 kWh controlled off-peak for off-peak metering

Queensland 1.5 kW systems:

Quarterly generation of 696 kWh
Quarterly export of 205 kWh
Quarterly import of 1147 kWh

- Thereof 344 kWh controlled off-peak for off-peak metering

Queensland 3 kW systems:
Quarterly generation of 1393 kWh
Quarterly export of 786 kWh
Quarterly import of 1031 kWh
- Thereof 309 kWh controlled off-peak for off-peak metering

Melbourne 1.5 kW systems:
Quarterly generation of 577 kWh
Quarterly export of 86 kWh
Quarterly import of 1147 kWh
- Thereof 344 kWh controlled off-peak for off-peak metering

Melbourne 3 kW systems:
Quarterly generation of 1154 kWh
Quarterly export of 547 kWh
Quarterly import of 1031 kWh
- Thereof 309 kWh controlled off-peak for off-peak metering

Victoria 1.5 kW systems:
Quarterly generation of 671 kWh
Quarterly export of 180 kWh
Quarterly import of 1147 kWh
- Thereof 344 kWh controlled off-peak for off-peak metering

Victoria 3 kW systems:
Quarterly generation of 1342 kWh
Quarterly export of 735 kWh
Quarterly import of 1031 kWh
- Thereof 309 kWh controlled off-peak for off-peak metering

Sydney 1.5 kW systems:
Quarterly generation of 605 kWh
Quarterly export of 114 kWh
Quarterly import of 1147 kWh
- Thereof 344 kWh controlled off-peak for off-peak metering
- Thereof 229 kWh peak, 574 kWh shoulder and 344 kWh off-peak for TOU metering

Sydney 3 kW systems:
Quarterly generation of 1211 kWh
Quarterly export of 604 kWh
Quarterly import of 1031 kWh
- Thereof 309 kWh controlled off-peak for off-peak metering
- Thereof 206 kWh peak, 516 kWh shoulder and 309 kWh off-peak for TOU metering

NSW 1.5 kW systems:
Quarterly generation of 675 kWh
Quarterly export of 184 kWh
Quarterly import of 1147 kWh

- Thereof 344 kWh controlled off-peak for off-peak metering
- Thereof 229 kWh peak, 574 kWh shoulder and 344 kWh off-peak for TOU metering

NSW 3 kW systems:
Quarterly generation of 1351 kWh
Quarterly export of 744 kWh
Quarterly import of 1031 kWh

- Thereof 309 kWh controlled off-peak for off-peak metering
- Thereof 206 kWh peak, 516 kWh shoulder and 309 kWh off-peak for TOU metering

APPENDIX 2 – Solar retail offers in other network areas

Retail solar offers in the Victorian network areas of SP Ausnet, Jemena and United Energy, and NSW's Endeavour Energy network area. The charts below show solar retail offers (as annual bills) within network areas not covered in Part 1 of this report.

Chart 26 SP Ausnet, Victoria, 1.5kW systems, solar offers as estimated annual bills (incl. GST)

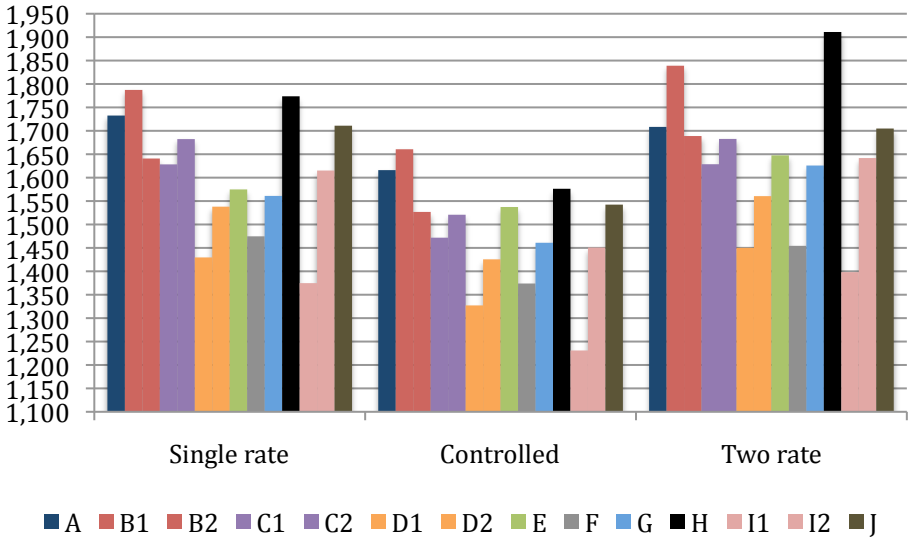


Chart 27 SP Ausnet, Victoria, 3kW systems, solar offers as estimated annual bills (incl. GST)

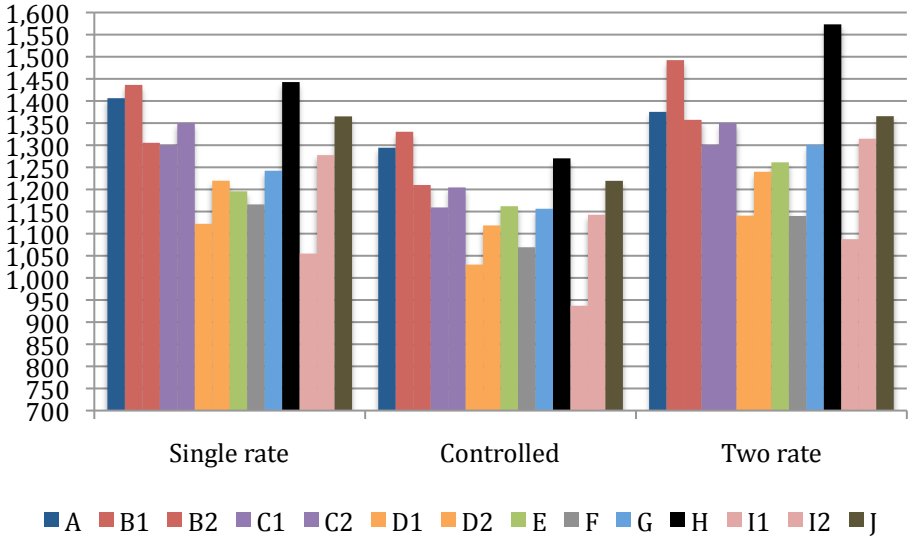


Chart 28 Jemena, Melbourne, 1.5kW systems, solar offers as estimated annual bills (incl. GST)

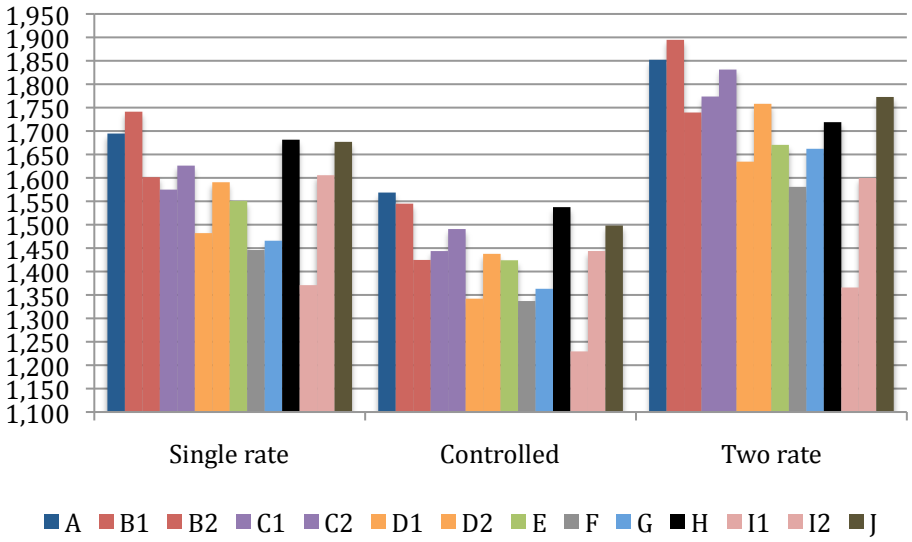


Chart 29 Jemena, Melbourne, 3kW systems, solar offers as estimated annual bills (incl. GST)

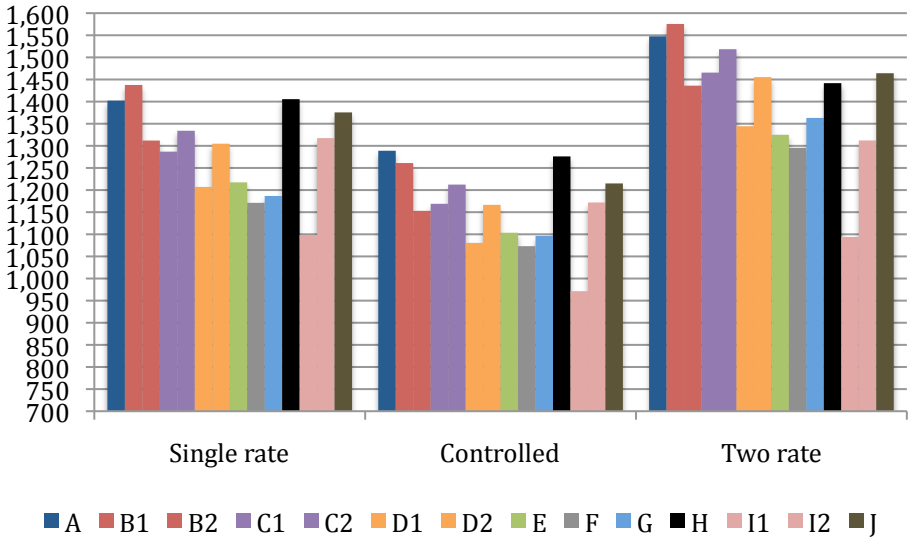


Chart 30 United Energy, Melbourne, 1.5kW systems, solar offers as estimated annual bills (incl. GST)

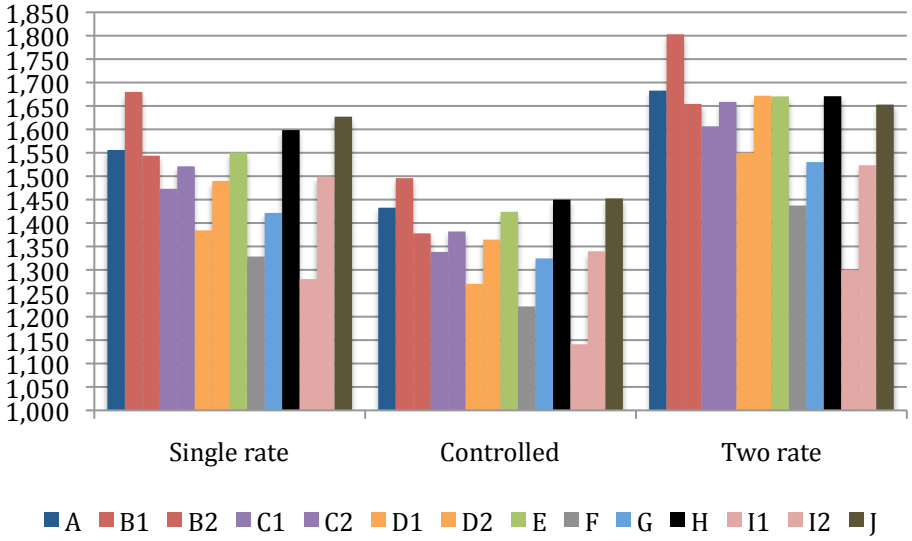


Chart 31 United Energy, Melbourne, 3kW systems, solar offers as estimated annual bills (incl. GST)

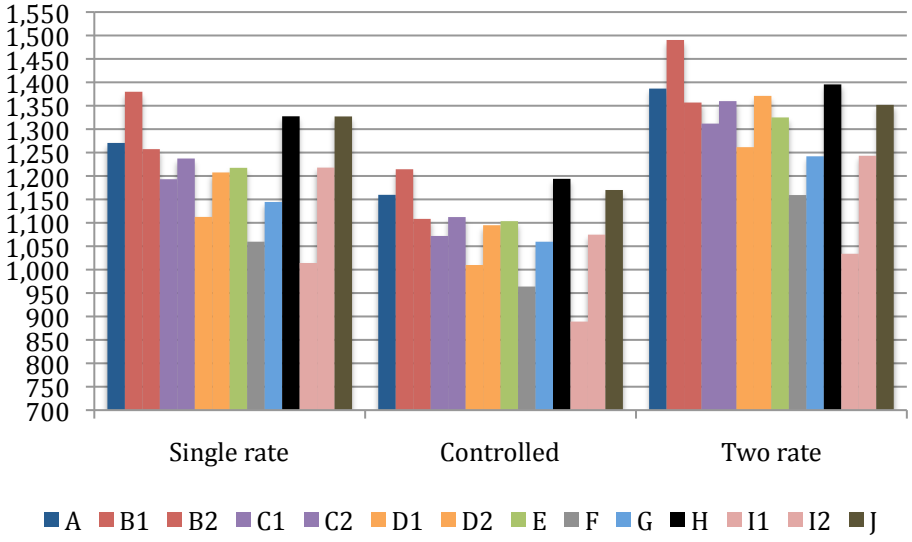


Chart 32 Endeavour Energy, Sydney, 1.5kW systems, solar offers as estimated annual bills (incl. GST)

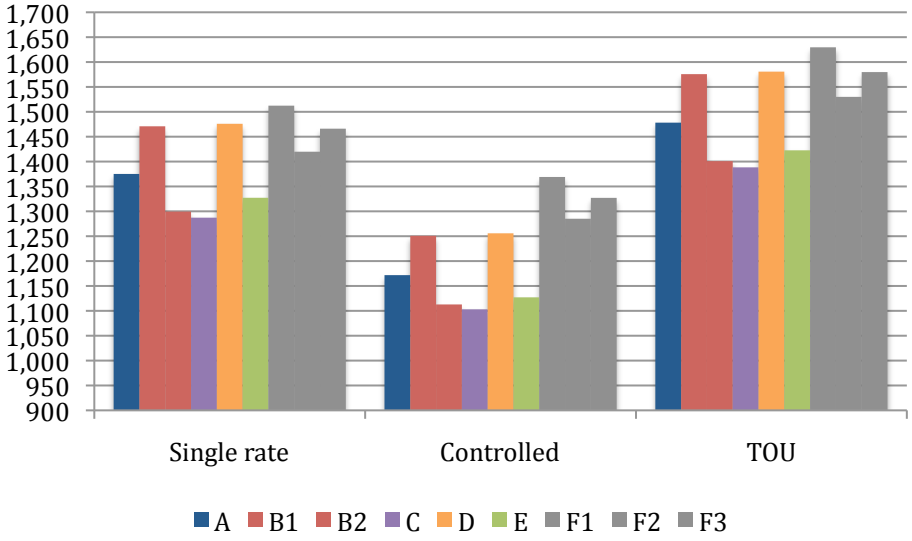


Chart 33 Endeavour Energy, Sydney, 3kW systems, solar offers as estimated annual bills (incl. GST)