

PRELIMINARY REPORT TO
QUEENSLAND COMPETITION AUTHORITY

17 MARCH 2016

REGULATED RETAIL PRICES FOR 2016-17



ESTIMATING THE EFFICIENT RETAILER
COSTS





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C O N T E N T S

GLOSSARY OF TERMS	I
EXECUTIVE SUMMARY	I
1	
<i>Introduction</i>	<i>1</i>
2	
<i>Methodology</i>	<i>1</i>
2.1 Best practice methodology for estimating the efficient retailer costs	1
2.2 Overview of our methodology	1
2.3 Benchmarking retailer costs	1
2.4 Bottom-up analysis	1
2.5 Indexing the retailer costs	1
2.6 Estimating the efficient retailer costs	1
3	
<i>Benchmarking inputs</i>	<i>1</i>
3.1 Retail electricity tariffs	1
3.2 Network costs	1
3.3 Energy costs	1
3.4 Retailer costs	1
4	
<i>Benchmarking analysis</i>	<i>1</i>
4.1 Calculating the fixed and variable components of the retailer costs	1
4.2 Calculating the ROC and retail margin	1
4.3 Benchmarking retailer costs – residential tariffs	1
4.4 Benchmarking retailer costs – small business tariffs	1
4.5 Benchmarking retailer costs – residential and small business tariffs	1
5	
<i>Bottom-up analysis</i>	<i>1</i>
5.1 Customer segments	1
5.2 Retail operating costs	1
5.3 Retail margin	1
5.4 Indexing the retailer costs	1
6	
<i>Estimating efficient retailer costs</i>	<i>1</i>
6.1 Defining the customer segments	1
6.2 An efficient retailer cost for small customers in 2015-16	1
6.3 An efficient retailer cost for large and very large customers in 2015-16	1
6.4 Indexing the fixed retailer cost	1
6.5 Indexing the variable retailer cost	1

C O N T E N T S

APPENDICES

A

Retail tariffs included in the benchmarking analysis

A-1

B

Average retailer costs

B-1

FIGURES

FIGURE ES 1	COMPONENTS OF THE RETAIL ELECTRICITY TARIFF	1
FIGURE ES 2	FIXED AND VARIABLE RETAILER COSTS, RESIDENTIAL RETAIL TARIFFS, 2015-16, WITH OUTLIERS REMOVED AND ADJUSTED FOR HIGHER COSTS IN VICTORIA	1
FIGURE ES 3	NORMALISED RETAILER COSTS, BY RETAILER FOR RESIDENTIAL CUSTOMERS, OUTLIERS EXCLUDED, 2015-16	1
FIGURE ES 4	FIXED AND VARIABLE RETAILER COSTS, SMALL BUSINESS RETAIL TARIFFS, 2015-16, WITH OUTLIERS REMOVED AND ADJUSTED FOR HIGHER COSTS IN VICTORIA	1
FIGURE ES 5	NORMALISED RETAILER COSTS, BY RETAILER FOR SMALL BUSINESS CUSTOMERS, OUTLIERS EXCLUDED, 2015-16	1
FIGURE ES 6	FIXED AND VARIABLE RETAILER COSTS, RESIDENTIAL AND SMALL BUSINESS RETAIL TARIFFS, 2015-16, WITH OUTLIERS REMOVED, AND ADJUSTED FOR HIGHER COSTS IN VICTORIA	1
FIGURE ES 7	ACTUAL AGGREGATE ROC BY RETAILER FOR SMALL CUSTOMERS, 2014-15	1
FIGURE ES 8	BREAKDOWN OF ROC AND DEPRECIATION COSTS BY RETAILER FOR SMALL CUSTOMERS, 2014-15	1
FIGURE ES 9	VARIANCE BETWEEN THE ROC FOR SMALL CUSTOMERS AND THE ROC FOR LARGER CUSTOMERS, 2014-15	1
FIGURE 2.1	COMPONENTS OF THE RETAIL ELECTRICITY TARIFF	1
FIGURE 2.2	ESTIMATING THE EFFICIENT RETAILER COST	1
FIGURE 4.1	COMPONENTS OF A RETAIL ELECTRICITY BILL	1
FIGURE 4.2	COMPONENTS OF THE RETAILER COSTS	1
FIGURE 4.3	FIXED AND VARIABLE RETAILER COSTS FOR RESIDENTIAL RETAIL TARIFFS, 2015-16	1
FIGURE 4.4	FIXED AND VARIABLE RETAILER COSTS, RESIDENTIAL RETAIL TARIFFS, BY STATE, 2015-16, ADJUSTED FOR HIGHER COSTS IN VICTORIA	1
FIGURE 4.5	FIXED AND VARIABLE RETAILER COSTS, RESIDENTIAL RETAIL TARIFFS, 2015-16, ADJUSTED FOR HIGHER COSTS IN VICTORIA AND OUTLIERS REMOVED	1
FIGURE 4.6	FIXED AND VARIABLE RETAILER COSTS AS A FUNCTION OF AVERAGE CONSUMPTION, RESIDENTIAL CUSTOMERS, 2015-16	1
FIGURE 4.7	NORMALISED RETAILER COSTS, BY RETAILER FOR RESIDENTIAL CUSTOMERS, OUTLIERS EXCLUDED, 2015-16	1
FIGURE 4.8	FIXED AND VARIABLE RETAILER COSTS FOR SMALL BUSINESS RETAIL TARIFFS, 2015-16	1
FIGURE 4.9	FIXED AND VARIABLE RETAILER COSTS, SMALL BUSINESS RETAIL TARIFFS, 2015-16, WITH OUTLIERS REMOVED AND ADJUSTED FOR HIGHER COSTS IN VICTORIA	1
FIGURE 4.10	FIXED AND VARIABLE RETAILER COSTS AS A FUNCTION OF AVERAGE CONSUMPTION, SMALL BUSINESS CUSTOMERS, 2015-16	1
FIGURE 4.11	NORMALISED RETAILER COSTS, BY RETAILER FOR SMALL BUSINESS CUSTOMERS, OUTLIERS EXCLUDED, 2015-16	1
FIGURE 4.12	FIXED AND VARIABLE RETAILER COSTS, RESIDENTIAL AND SMALL BUSINESS RETAIL TARIFFS, 2015-16, WITH OUTLIERS REMOVED, AND ADJUSTED FOR HIGHER COSTS IN VICTORIA	1
FIGURE 5.1	ACTUAL AGGREGATE ROC BY RETAILER FOR SMALL CUSTOMERS, 2014-15	1
FIGURE 5.2	BREAKDOWN OF ROC AND DEPRECIATION COSTS BY RETAILER FOR SMALL CUSTOMERS, 2014-15	1
FIGURE 5.3	ELECTRICITY CUSTOMERS IN HARDSHIP PROGRAM, Q1 2015-16	1

C O N T E N T S

FIGURE 5.4	AVERAGE FIXED RETAILER COSTS BY ELECTRICITY DISTRIBUTION AREA, 2015-16	1
FIGURE 5.5	VARIANCE BETWEEN THE ROC FOR SMALL CUSTOMERS AND THE ROC FOR LARGER CUSTOMERS, 2014-15	1
FIGURE 5.6	AVERAGE VARIABLE RETAILER COSTS BY ELECTRICITY DISTRIBUTION AREA, 2015-16	1
FIGURE 6.1	IMPACT OF RETAILER COST OPTIONS ON TYPICAL RETAIL ELECTRICITY BILLS, 2015-16	1

TABLES

TABLE ES 1	IMPACT OF RETAILER COST OPTIONS ON RETAIL ELECTRICITY BILLS, 2015-16	1
TABLE 3.1	NUMBER OF RESIDENTIAL RETAIL ELECTRICITY TARIFFS SOURCED	1
TABLE 3.2	SMALL BUSINESS RETAIL ELECTRICITY TARIFFS SOURCED	1
TABLE 3.3	AVERAGE CONSUMPTION BY DISTRIBUTOR	1
TABLE 3.4	FACTORS FOR APPLYING UPFRONT DISCOUNTS TO RETAIL ELECTRICITY BILLS	1
TABLE 3.5	NETWORK TARIFFS BY DISTRIBUTOR	1
TABLE 3.6	NETWORK COSTS BY DISTRIBUTOR IN 2015-16 (2015 FOR VICTORIA), BASED ON AVERAGE CONSUMPTION FOR THAT TARIFF OR ELECTRICITY DISTRIBUTION AREA	1
TABLE 3.7	METERING COSTS BY DISTRIBUTOR IN 2015-16 (2015 FOR VICTORIA)	1
TABLE 3.8	WHOLESALE ENERGY COSTS BY DISTRIBUTION AREA	1
TABLE 3.9	OTHER ENERGY COSTS	1
TABLE 3.10	LOSS FACTORS AND NETWORK LOSSES BY DISTRIBUTOR	1
TABLE 3.11	ESTIMATE OF COST ASSOCIATED WITH REES	1
TABLE 5.1	DEFINITION OF CUSTOMER SEGMENTS	1
TABLE 5.2	INFORMATION PROVIDED BY THE RETAILERS	1
TABLE 6.1	IMPACT OF RETAILER COST OPTIONS ON RETAIL ELECTRICITY BILLS, 2015-16	1
TABLE A.1	RESIDENTIAL RETAIL TARIFFS SOURCED FOR THE BENCHMARKING ANALYSIS	A-1
TABLE A.2	SMALL BUSINESS RETAIL TARIFFS SOURCED FOR THE BENCHMARKING ANALYSIS	A-1
TABLE B.1	AVERAGE RETAILER COST FOR RESIDENTIAL TARIFFS	B-1
TABLE B.2	AVERAGE RETAILER COST FOR SMALL BUSINESS TARIFFS	B-1



GLOSSARY OF TERMS

ACCC	Australian Competition and Consumer Commission
ACIL Allen	ACIL Allen Consulting
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AFMA	Australian Financial Markets Association
Association	Queensland Consumers Association
CARC	Customer acquisition and retention costs
CER	Clean Energy Regulator
CPI	Consumer Price Index
DLF	Distribution Loss Factor
EBITDA	Earnings before interest, tax, depreciation and amortisation
EEQ	Ergon Energy Queensland
ESC	Energy Savings Certificate
ESCOSA	Essential Services Commission of South Australia
ESS	Energy Savings Scheme
GST	Goods and services tax
GWh	Giga Watthour (equal to 10 ⁹ Watthours)
IPART	Independent Pricing and Regulatory Tribunal
kWh	kilo Watthour (equal to 1,000 or 10 ³ Watthours)
LGC	Large-scale Generation Certificate
LRET	Large-scale Renewable Energy Target
MLF	Marginal Loss Factor

MWh	Mega Watthour (equal to 1,000,000 or 10 ⁶ Watthours)
NECF	National Energy Customer Framework
NEM	National Electricity Market
NSLP	Net System Load Profile
NSW	New South Wales
Origin	Origin Energy
PTRM	Post Tax Revenue Model
PV	Photovoltaic
QCA	Queensland Competition Authority
QCOSS	Queensland Council of Social Service
REES	Retailer Energy Efficiency Scheme
RET	Renewable Energy Target
RIN	Regulatory Information Notice
ROC	Retail operating cost
RPP	Renewable Power Percentage
SRES	Small-scale Renewable Energy Scheme
STP	Small-scale Technology Percentage
TOU	Time of use
VEEC	Victorian Energy Efficiency Certificate
VEET	Victorian Energy Efficiency Target
WEC	Wholesale energy costs



EXECUTIVE SUMMARY

Following the introduction of full retail competition in the Queensland electricity market on 1 July 2007, all retail electricity customers in Queensland can choose to either:

- negotiate a market retail contract with a retailer and pay a price determined by that retailer, or
- remain on a standard retail contract with the price:
 - for customers in south east Queensland, determined by the retailer
 - for customers in regional Queensland, determined by the Minister or the Queensland Competition Authority (QCA), where that function has been delegated by the Minister under section 90(1) of the *Electricity Act 1994*.

The QCA has received a delegation from the Minister to determine the regulated retail electricity prices for regional Queensland for 2016-17.

The QCA is proposing to adopt a similar approach to previous years to determine the regulated retail electricity prices through a build-up of energy, network and retailer costs for a representative retailer.

Two of the components of the retailer cost are the retail operating cost (ROC) and the retail margin. The QCA has previously defined ROC and the retail margin as follows:

ROC are the costs associated with services provided by a retailer to its customers and typically include the costs associated with customer administration, call centres, corporate overheads, billing and revenue collection, IT systems, regulatory compliance, and customer acquisition and retention (CARC).¹

The retail margin compensates retailers for their exposure to systematic risk associated with providing customer retail services.²

The retail margin has historically been set relative to the retailers' EBITDA (earnings before interest, tax, depreciation and amortisation) and therefore includes an allowance for tax, depreciation and amortisation, and a return to the retailers.

ACIL Allen Consulting (ACIL Allen) has been engaged by the QCA to estimate the efficient retailer costs for a representative electricity retailer serving residential and business customers in Queensland as part of the 2016-17 review of regulated electricity tariffs.

Methodology

In 2013 the Australian Energy Market Commission (AEMC) published advice on a best practice methodology for setting regulated retail electricity prices for small customers.

The AEMC identified two methods for setting an efficient retailer cost:

¹ Queensland Competition Authority, *Regulated retail electricity prices for 2015-16, Final determination*, June 2015, page 27

² *Ibid*, page 31

- a **benchmarking** approach, which involves examining publicly available information on retail operating costs, either from publicly listed companies and/or other regulatory decisions
- a **bottom-up** approach, which involves requesting retailers to provide information on their operating costs.³

The AEMC recommended that the regulator use both benchmarking and a bottom-up assessment as tools in assessing an efficient retailer cost.

Consistent with this recommendation, we have used both benchmarking and a bottom-up assessment to estimate an efficient retailer cost for a representative electricity retailer serving residential and business customers in Queensland in 2016-17.

Benchmarking approach

Over the last couple of years, retail electricity prices have been deregulated in NSW and South Australia, and they have been deregulated in Victoria for some years. Across these three jurisdictions, there are nine electricity distribution areas⁴, each with at least nine active retailers⁵, many of which have multiple tariff offerings publicly available for residential and small business customers.

While retail prices continue to be regulated in Queensland, around 70 per cent of customers in south east Queensland⁶ are now on market offers.⁷

There is therefore now a rich set of Australian data available in competitive retail electricity market environments in NSW, Queensland, South Australia and Victoria that can be used to benchmark an efficient retailer cost.

We have used this data to benchmark the efficient fixed and variable components of the retailer cost for residential and small business customers in Queensland. This required careful consideration of:

- the costs incurred in other jurisdictions that are not incurred in Queensland
- the costs incurred in Queensland that are not incurred in other jurisdictions
- differences in the average consumption across jurisdictions
- differences in the rate of churn of customers across jurisdictions
- differences in the timing in setting retail tariffs, which relates to differences in the timing in setting network tariffs – while network tariffs in Queensland, NSW and South Australia are updated each financial year, network tariffs in Victoria are updated each calendar year.

The fixed retailer costs and variable retailer costs are closely related. The allocation of costs between the two categories may sometimes be arbitrary and for a given retailer may change over time. A retailer could, for example, invest in IT and increase the level of automation in the business, which may decrease the fixed retailer cost (the costs to serve a customer) and increase the variable retailer cost (the return on and of the IT assets).

Retail electricity tariffs for large business customers are often subject to negotiation between retailers and customers, and are thus not generally available in the public domain to enable benchmarking.

Bottom-up analysis

We requested detailed information from the retailers on their forecasts of the retail operating costs and retail margin to be able to assess those estimates on a bottom-up basis.

We sought financial information as well as a range of metrics, cost allocation methodologies and a reconciliation between the retailer's publicly available retail operating cost and retail margin and their cost estimates, so that we were able to undertake the analysis. We sought historical information as well as projected information.

We used the bottom-up analysis to:

³ Australian Energy Market Commission, *Advice on best practice retail price methodology*, Final report, page 60

⁴ Five in Victoria (AusNet Services, CitiPower, Jemena, Powercor and United Energy), three in NSW (AusGrid, Endeavour Energy and Essential Energy) and one in South Australia (SA Power Networks).

⁵ AGL, Origin Energy, Energy Australia, Simply Energy, Lumo Energy, Red Energy, Alinta, M2 Energy and Momentum.

⁶ In Energex's electricity distribution area.

⁷ The retailers active in south east Queensland are AGL, Origin Energy, Energy Australia, Click Energy, Lumo Energy, and M2 Energy.

- disaggregate the retailer costs
- validate and cross-check the fixed and variable components of the retailer cost estimated using the benchmarking approach
- identify whether there are any cost drivers which would indicate that the efficient costs for providing retail electricity services in Energex's distribution area are different to the efficient costs for providing retail electricity services in Ergon Energy's distribution area, and if so, the extent to which the costs are different
- identify the appropriate definitions of small, large and very large customers on the basis of the way in which customers of increasing size are managed by the retailer
- estimate the additional efficient retailer costs required to service large and very large customers.

Estimate of the efficient retailer costs

We estimated the efficient fixed retailer cost for residential and small business customers. The fixed retailer cost was estimated based on the benchmarking of retail market offers, a bottom-up analysis of the estimates provided by the retailers, and publicly available information on the retailers' cost to serve. The fixed retailer cost was estimated on the basis of an amount per customer.

We estimated the efficient variable retailer cost for residential and small business customers. The variable retailer cost was estimated based on the benchmarking of retail market offers and a bottom-up analysis of the estimates provided by the retailers.

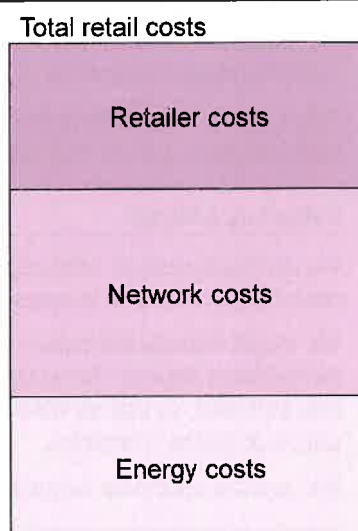
The retailers provided their historical and, in some cases, forecast retailer costs for large and very large customers.

Benchmarking retailer costs

We estimated the efficient retailer costs for residential and small business customers by deconstructing the components of retail electricity tariffs that are available in jurisdictions with competitive retail electricity markets, and benchmarking the retailer costs.

As illustrated in Figure ES 1, retail electricity tariffs comprise three broad components – network costs, energy costs and retailer costs (fixed and variable components). By deducting the network costs and energy costs from the retail electricity tariff, the retailer costs can be derived.

FIGURE ES 1 COMPONENTS OF THE RETAIL ELECTRICITY TARIFF



The retail electricity tariffs and network tariffs were available publicly. We estimated the energy costs using the same methodology that was adopted by the QCA in its determination of regulated retail tariffs for Queensland between 2013-14 and 2015-16.

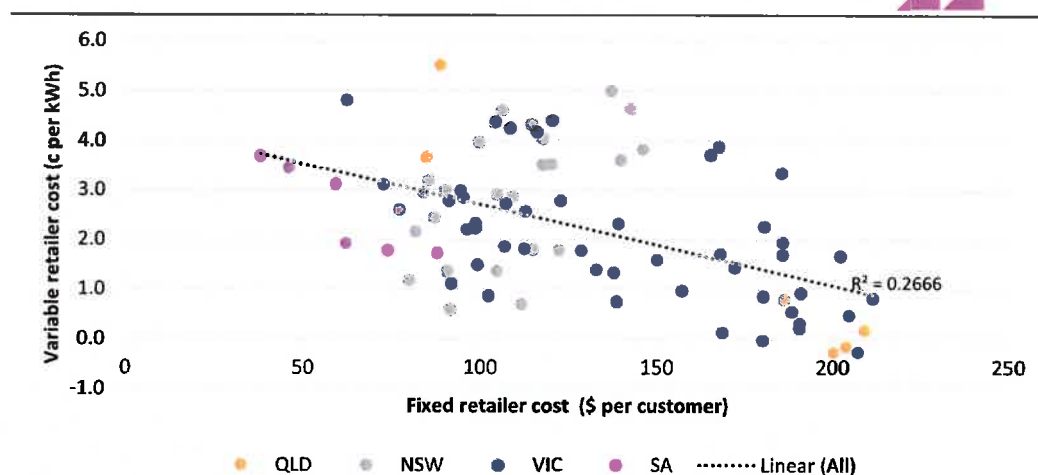
The retailer costs were adjusted, where applicable, for the costs that were incurred in a jurisdiction that were not incurred in other jurisdictions. This included consideration of state-based energy efficiency schemes, the roll-out of smart meters in Victoria, the applicable regulatory regime and regulatory fees.

Data was not available to quantify the impact of smart meters in Victoria, the state-based regulatory regime, a higher churn rate and licence fees in Victoria. We therefore considered the impact of potentially higher costs in our benchmarking analysis, and made an adjustment accordingly.

Benchmarking retailer costs – residential tariffs

The fixed and variable retailer costs incorporated within each residential retail electricity tariff analysed for 2015-16 (in the case of NSW, Queensland and South Australia) and 2015 (in the case of Victoria) are plotted in Figure ES 2. The fixed retailer costs for Victoria have been escalated by six months CPI so that they are presented on the same basis. The variable retailer costs for Victoria have been adjusted to account for the higher costs incurred in that state, and a small number of outlier data points have been removed.⁸

FIGURE ES 2 FIXED AND VARIABLE RETAILER COSTS, RESIDENTIAL RETAIL TARIFFS, 2015-16, WITH OUTLIERS REMOVED AND ADJUSTED FOR HIGHER COSTS IN VICTORIA



Note: The fixed retailer costs for Victoria have been escalated by six months CPI so that the fixed retailer costs are presented on the same basis. The fixed retailer costs for Queensland retailers exclude the QCA regulatory fees.

SOURCE: ACIL ALLEN

Figure ES 2 indicates that there is a wide spread of retailer costs, and there is a relationship between the fixed and variable retailer costs; as the fixed retailer cost increases, the variable retailer cost decreases.

This is unsurprising. The allocation of costs by the retailers between the fixed component and variable component is dependent on their cost allocation methodology. While there are some costs that are clearly driven by customer numbers, such as the costs associated with call centres, billing and revenue collection (excluding bad debts) and customer acquisition and retention costs, the retailer has discretion as to whether the other costs, such as the costs associated with IT systems, regulatory compliance and depreciation are allocated on the basis of customer numbers or consumption.

The decision on the cost allocation methodology will vary depending on the retailer's risk appetite. If costs are allocated based on customer numbers, the retailer has a high degree of certainty that the costs will be recovered from its customer base, regardless of the energy consumed. If costs are allocated based on energy consumption, the ability to recover the costs will vary depending on the energy consumed by its customers.

⁸ Outlier data points are those where the fixed retailer cost or variable retailer cost (on a cents per kWh basis) are more than two standard deviations from the mean.

The retailers appear to have a preference to recover more costs through a per customer charge rather than through a per consumption basis in a regulated environment. This is evident through the regulatory process. The retailers have advocated for a higher retail operating cost than is evident in market offers, as demonstrated by the benchmarking analysis, through their submissions to the QCA's Interim Consultation Paper, and the information provided in their Information Requests.

There are equity considerations associated with allocating a high proportion of the retailer costs on the basis of the number of customers. If a high proportion of the retailer costs is allocated on the basis of the number of customers, then the fixed charge will be a relatively high proportion of the retail electricity bill for customers with a low level of consumption and a relatively lower proportion of the retail electricity bill for customers with a high level of consumption.

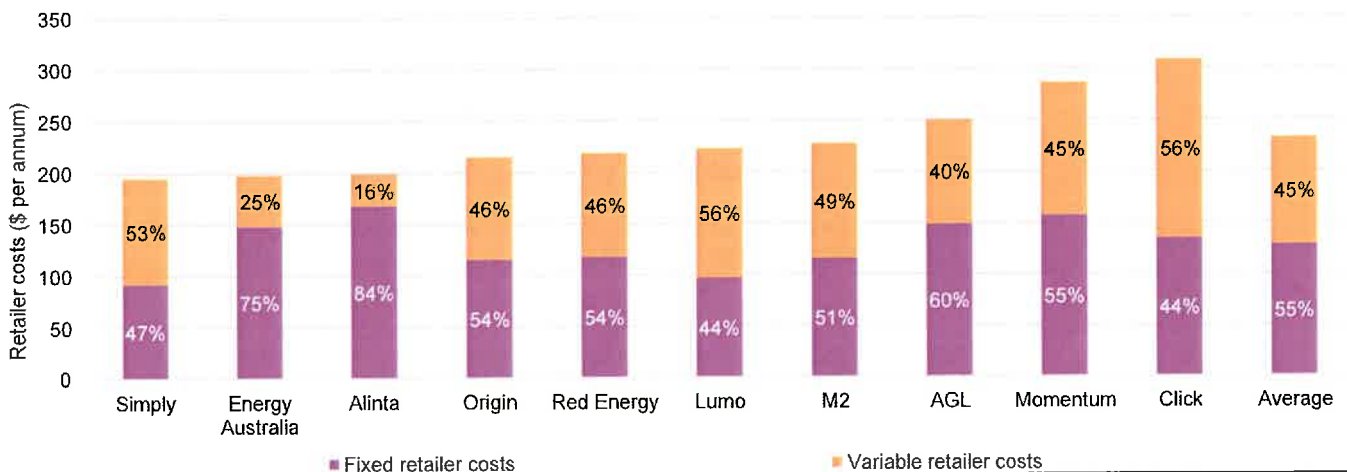
We have used a line of best fit across the adjusted data, as illustrated in Figure ES 2, to determine a relationship between the fixed and variable retailer costs for residential retail bills. The relationship is provided in formula ES (1).

$$\text{Variable retailer costs} = -0.0163 \times \text{Fixed retailer costs} + 4.3382 \quad \text{ES (1)}$$

As an example, this formula indicates that the variable retailer costs are 2.25 cents per kWh when the fixed retailer costs (excluding QCA regulatory fees) are at the mean value for the dataset of residential retail tariffs (\$127.93 per annum).

The average fixed and variable retailer costs, for the most efficient retailer tariffs offered by each of the retailers included in our dataset, across each of the distribution areas, are illustrated in Figure ES 3. To ensure that the retailer costs are comparable, they have all been calculated on the basis of the average residential consumption in Energex's area (4,640 kWh per annum).

FIGURE ES 3 NORMALISED RETAILER COSTS, BY RETAILER FOR RESIDENTIAL CUSTOMERS, OUTLIERS EXCLUDED, 2015-16



Note: Retailer costs calculated on an annual consumption of 4,640 kWh

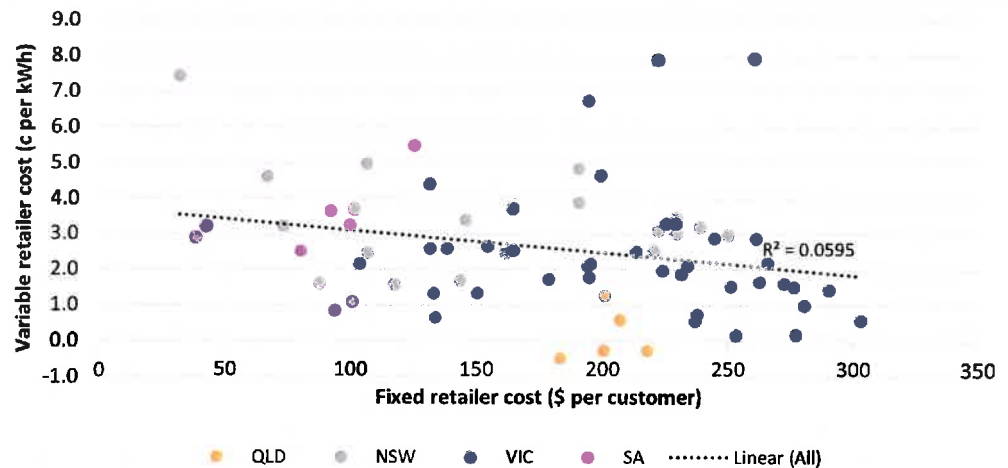
SOURCE: ACIL ALLEN

Benchmarking retailer costs – small business tariffs

The fixed and variable retailer costs incorporated within each small business retail electricity tariff analysed for 2015-16 (in the case of NSW, Queensland and South Australia) and 2015 (in the case of Victoria) are plotted in Figure ES 4. The fixed retailer costs for Victoria have been escalated by six months CPI so that they are presented on the same basis. The variable retailer costs for Victoria have been adjusted to account for the higher costs incurred in that state, and a small number of outlier data points have been removed.⁹

⁹ Outlier data points are those where the fixed retailer cost or variable retailer cost (on a cents per kWh basis) are more than two standard deviations from the mean.

FIGURE ES 4 FIXED AND VARIABLE RETAILER COSTS, SMALL BUSINESS RETAIL TARIFFS, 2015-16, WITH OUTLIERS REMOVED AND ADJUSTED FOR HIGHER COSTS IN VICTORIA



Note: The fixed retailer costs for Victoria have been escalated by six months CPI so that the fixed retailer costs are presented on the same basis. The fixed retailer costs for Queensland retailers exclude the QCA regulatory fees.

SOURCE: ACIL ALLEN

As with the retailer costs for residential customers, there is a wide spread of retailer costs for small business customers.

Figure ES 4 illustrates that the relationship between the fixed and variable retailer costs that was evident for residential customers is less evident for small business customers. While the variable retailer cost decreases as the fixed retailer cost increases, the decrease is not as significant for small business customers as for residential customers.

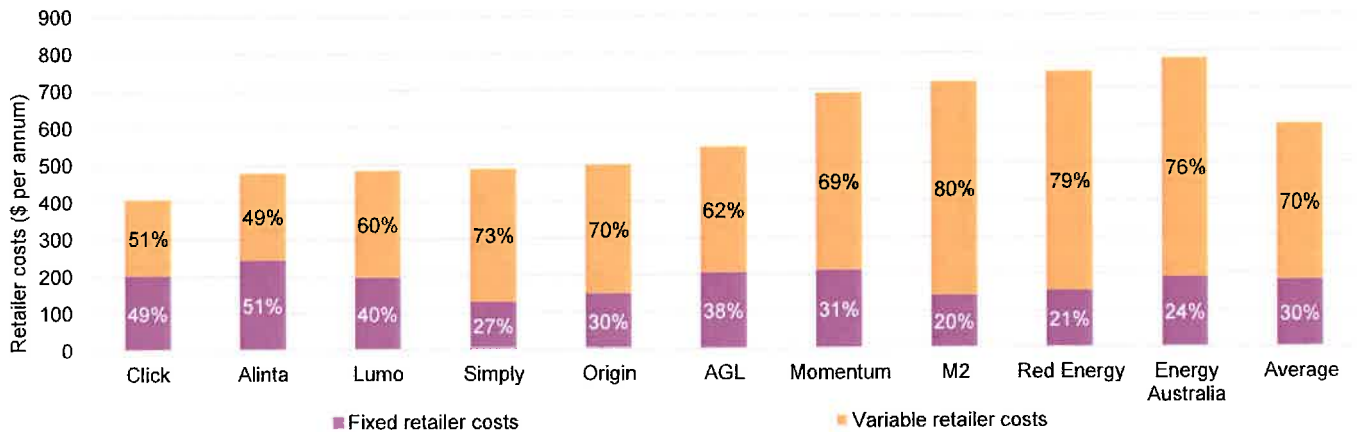
This is because the average annual small business customer's retail bill in our dataset was higher (\$3,932) than the average annual residential customer's retail bill (\$1,353). The fixed retailer cost is therefore generally a smaller component of a small business customer's retail bill than a residential customer's bill. A greater proportion of the retailer costs is recovered through the variable component of the retail electricity bills for small business customers than for residential customers.

We have used a line of best fit across the adjusted data, as illustrated in Figure ES 4, to determine a relationship between the fixed and variable retailer costs for small business retail bills. The relationship is provided in formula ES (2).

$$\text{Variable retailer costs} = -0.0063 \times \text{Fixed retailer costs} + 3.7274 \quad \text{ES (2)}$$

As an example, this formula indicates that the variable retailer costs are 2.58 cents per kWh when the fixed retailer costs (excluding QCA regulatory fees) are at the mean value for the dataset of small business retail tariffs (\$181.56 per annum).

The average fixed and variable retailer costs, for the most efficient retailer tariffs offered by each of the retailers included in our dataset, across each of the distribution areas, are illustrated in Figure ES 5. To ensure that the retailer costs are comparable, they have all been calculated on the basis of the average small business consumption in Energen's area (16,370 kWh per annum).

FIGURE ES 5 NORMALISED RETAILER COSTS, BY RETAILER FOR SMALL BUSINESS CUSTOMERS, OUTLIERS EXCLUDED, 2015-16

Note: Retailer costs calculated on an annual consumption of 16,370 kWh

SOURCE: ACIL ALLEN

The retailer costs for small business customers are higher than the retailer costs for residential customers. This may be due to the greater variability in the energy consumed by small business customers than residential customers, and a consequential underestimation of the wholesale energy costs. However, if the same approach is used for the purposes of the benchmarking analysis and to project wholesale energy costs for 2016-17, then any under or over estimates in the wholesale energy cost and retailer cost will be offset in a consistent manner.

Additionally, there may be higher costs associated with supplying small business customers than residential customers, for example, the “larger” small business customers may receive monthly electricity bills rather than quarterly electricity bills.

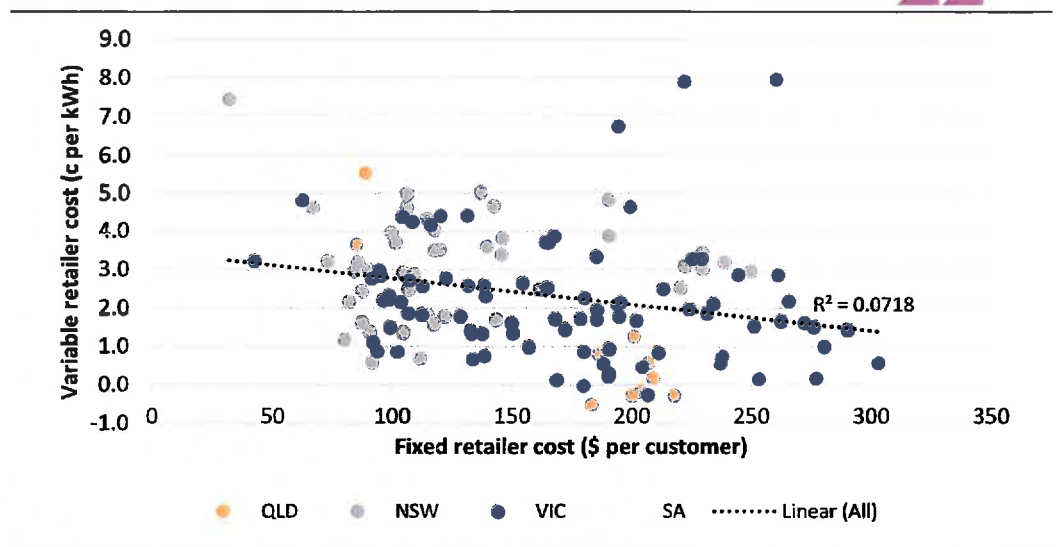
Benchmarking retailer costs – residential and small business tariffs

As the QCA has previously determined a ROC and retail margin that applied to both residential and small business customers, Figure ES 6 plots the retailer costs for each residential and small business retail electricity tariff analysed for 2015-16 (in the case of NSW, Queensland and South Australia) and 2015 (in the case of Victoria¹⁰). The data in Figure ES 6 include the adjustments that have been made to the Victorian variable retailer cost, to allow for the higher costs experienced in Victoria, and the removal of a small number of outlier data points.¹¹

¹⁰ The ROCs for Victoria have been escalated by six months CPI so that the ROCs are presented on the same basis.

¹¹ Outlier data points are those where the fixed retailer cost or variable retailer cost (on a cents per kWh basis) are more than two standard deviations from the mean.

FIGURE ES 6 FIXED AND VARIABLE RETAILER COSTS, RESIDENTIAL AND SMALL BUSINESS RETAIL TARIFFS, 2015-16, WITH OUTLIERS REMOVED, AND ADJUSTED FOR HIGHER COSTS IN VICTORIA



Note: The fixed retailer costs for Victoria have been escalated by six months CPI so that the fixed retailer costs are presented on the same basis. The fixed retailer costs for Queensland retailers exclude the QCA regulatory fees.

SOURCE: ACIL ALLEN

We have used a line of best fit across the data to determine a relationship between the fixed and variable retailer costs for residential and small business retail bills. The relationship is provided in formula ES (3).

$$\text{Variable retailer costs} = -0.0068 \times \text{Fixed retailer costs} + 3.4370 \quad \text{ES (3)}$$

As an example, this formula indicates that the variable retailer costs are 2.40 cents per kWh when the fixed retailer costs (excluding QCA regulatory fees) are at the mean value for the dataset of small business retail tariffs (\$152.30 per annum).

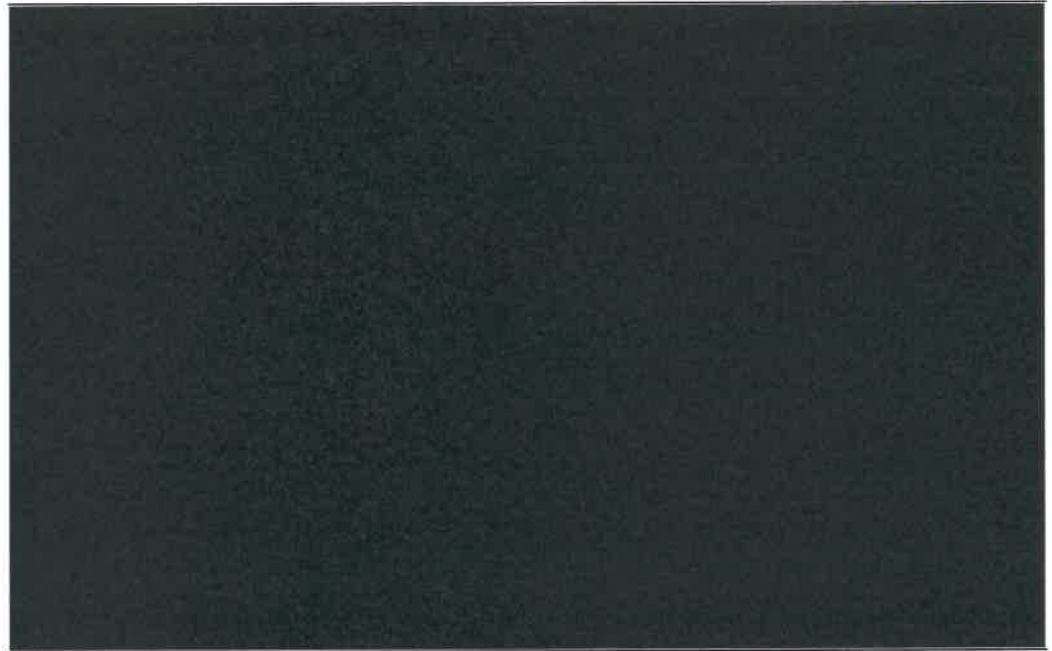
If the same retailer costs are applied to both residential and small business customers, the retailer costs will be higher for residential customers and lower for small business customers than if separate retailer costs are applied.

Bottom-up analysis

We received Information Requests from five retailers (Energy Australia, Ergon Energy Queensland (EEQ), Origin Energy (Origin), QEnergy and Sanctuary) while AGL provided a reconciliation between its published cost to serve and the cost to serve Queensland electricity customers.

Figure ES 7 illustrates the actual ROC incurred by each of the retailers in 2014-15 (purple bars), AGL's and Origin's publicly stated ROCs (gold bars) and the QCA's previous determination (grey bar). The actual ROC includes the QCA regulatory fees which were deducted as part of the benchmarking analysis.

FIGURE ES 7 ACTUAL AGGREGATE ROC BY RETAILER FOR SMALL CUSTOMERS, 2014-15



Note: Gold bars – publicly stated information

SOURCE: ACIL ALLEN BASED ON THE RETAILERS' INFORMATION REQUESTS, QCA'S FINAL DETERMINATION ON REGULATED RETAIL PRICES FOR 2014-15

The actual ROC generally varies around the QCA's determination.



Figure ES 8 provides a breakdown of the actual retailer costs for each retailer for 2014-15 by CARC, other costs that are clearly driven by the number of customers, other costs traditionally categorised as ROC (such as overhead costs), and depreciation and amortisation, which have traditionally been included in the retail margin. The customer driven costs include the costs associated with the call centre, and billing and revenue collection, and exclude costs associated with bad debts, where these are separately identified, and customer acquisition and retention, which are graphed separately. These customer driven costs would be expected to increase as the number of customers increases.

FIGURE ES 8 BREAKDOWN OF ROC AND DEPRECIATION COSTS BY RETAILER FOR SMALL CUSTOMERS, 2014-15



Note: [REDACTED]

SOURCE: ACIL ALLEN BASED ON THE RETAILERS' INFORMATION REQUESTS

The benchmarking analysis reveals that there is a trade-off between the fixed and variable retailer costs and that the balance between the two varies significantly by retailer. In determining the appropriate split between the fixed and variable retailer costs, the customer driven costs, including CARC, effectively provide a floor as to an appropriate level of the fixed retailer costs for small customers, and the total costs including depreciation and amortisation provide a ceiling.

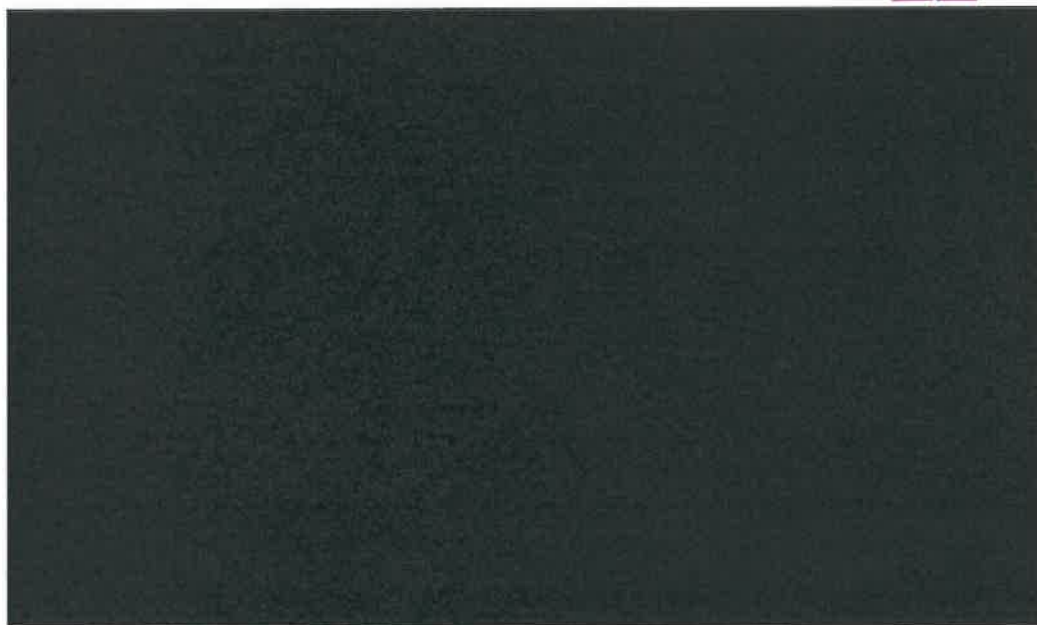
Figure ES 8 indicates that, based on the breakdown of costs incurred by the large retailers, the floor on the fixed retailer costs is around \$80 and the ceiling is around \$175.

The retailers provided little information on the ROC in future years, potential productivity improvements, and the retail margin.

Only [REDACTED] differentiated the ROC incurred for large and very large customers, although the definition of large and very large customers differed between the two. The other three retailers specified only one ROC. The ROC specified by [REDACTED] applied to small customers only while [REDACTED] applied to all customers.

Figure ES 9 illustrates the variance between the ROC for small customers and the larger customer segments, and compares these to the QCA's determination for 2014-15.

FIGURE ES 9 VARIANCE BETWEEN THE ROC FOR SMALL CUSTOMERS AND THE ROC FOR LARGER CUSTOMERS, 2014-15



SOURCE: ACIL ALLEN BASED ON THE RETAILERS' INFORMATION REQUESTS, QCA'S FINAL DETERMINATION ON REGULATED RETAIL PRICES FOR 2014-15

Estimating an efficient retailer cost

The benchmarking analysis has revealed that there is a relationship between an efficient fixed and variable retailer cost – as the fixed retailer cost increases, the variable retailer cost decreases.

The QCA therefore has the discretion to choose the combination of fixed and variable retailer costs that best meets its objectives.

An efficient retailer cost for small customers in 2015-16

While the QCA has historically determined a single retailer cost for all small customers – both residential and small business – the benchmarking analysis has revealed that the efficient retailer cost for small business customers is higher than the efficient retailer cost for residential customers, and the efficient retailer cost for all small customers is higher than the efficient retailer cost for residential customers.

If the efficient retailer cost is determined to be the same for all small customers, and is determined based on the efficient retailer costs as revealed by the benchmarking analysis, all else being equal, the regulated retail electricity bills for residential customers will generally increase and the retail electricity bills for small business customers will generally decrease.

If the efficient retailer cost is determined separately for residential customers and for small business customers, and is determined based on the efficient retailer costs as revealed by the benchmarking analysis, all else being equal, the regulated retail electricity bills for the average residential customer will remain relatively unchanged and will increase for a small business customer.

Given the discretion available to the QCA in determining an efficient retailer cost, Table ES 1 draws on the benchmarking analysis to illustrate the impact of the various options available on a customer in Energex's distribution area with average consumption, with consumption 20 per cent above the average and 20 per cent below the average. The options are:

- to specify the retailer cost separately for residential and small business customers, or to specify one retailer cost that applies to both

- to assume the same fixed retailer cost as the relevant mean in the benchmarking dataset
- to set the fixed retailer cost at the “floor”, which is equal to the retailer costs that are clearly driven by the number of customers (call centre, billing and revenue collection (excluding bad debts) and customer acquisition and retention costs)
- to set the fixed retailer cost at the “ceiling”, which includes all retail operating costs including costs associated with depreciation and amortisation.

TABLE ES 1 IMPACT OF RETAILER COST OPTIONS ON RETAIL ELECTRICITY BILLS, 2015-16

Option	Impact on customer retail bills				
	Fixed retailer cost	Variable retailer cost	Average consumption -20%	Average consumption	Average consumption +20%
	\$ per annum	cents per kWh	\$ per annum	\$ per annum	\$ per annum
Residential customers, residential retailer cost					
Fixed as per residential mean	127.93	2.25	\$ 1,163.59	\$ 1,368.61	\$ 1,573.62
Fixed at floor	80.00	3.03	\$ 1,144.74	\$ 1,357.02	\$ 1,569.31
Fixed at ceiling	175.00	1.48	\$ 1,182.10	\$ 1,379.98	\$ 1,577.86
Residential customers, small customer retailer cost					
Fixed as per small customer mean	152.30	2.40	\$ 1,193.57	\$ 1,399.98	\$ 1,606.40
Fixed at floor	80.00	2.89	\$ 1,139.57	\$ 1,350.56	\$ 1,561.55
Fixed at ceiling	175.00	2.24	\$ 1,210.52	\$ 1,415.50	\$ 1,620.48
Small business customers, small business retailer cost					
Fixed as per small business mean	181.56	2.58	\$ 3,440.48	\$ 4,181.79	\$ 4,923.09
Fixed at floor	80.00	3.22	\$ 3,423.03	\$ 4,185.35	\$ 4,947.68
Fixed at ceiling	175.00	2.62	\$ 3,439.35	\$ 4,182.02	\$ 4,924.68
Small business customers, small customer retailer cost					
Fixed as per small customer mean	152.30	2.40	\$ 3,387.52	\$ 4,122.90	\$ 4,858.27
Fixed at floor	80.00	2.89	\$ 3,379.80	\$ 4,131.32	\$ 4,882.84
Fixed at ceiling	175.00	2.24	\$ 3,389.94	\$ 4,120.25	\$ 4,850.56

Note: Fixed retailer costs and customer bills exclude QCA regulatory fees

SOURCE: ACIL ALLEN

An efficient retailer cost for large and very large customers in 2015-16

The retailers provided limited information on the ROC for large and very large customers and the information varied significantly by retailer.

The risks associated with the QCA determining a retailer cost for large and very large customers that is above the efficient cost are lower than the risks associated with the QCA determining a retailer cost for small customers that is above the efficient cost, as the market is more competitive and the retailer costs are a relatively small proportion of the retail electricity bill for a large or very large customer.

Given the small number of data points, the variability in the data provided, and the risks associated with the QCA determining a retailer cost for large and very large customers that is too high, there is no compelling evidence that the retailer cost for large and very large customers should vary from the QCA's previous determination.

Indexing the fixed retailer cost

The fixed retailer cost has been calculated based on benchmark data for 2015-16 and will need to be indexed to 2016-17. Additionally, the fixed retailer cost may need to be indexed to future years.

The information provided by the retailers and the published results from AGL and Origin would appear to indicate that, in the short term, the growth in the costs of wages and materials appear to be offset by productivity improvements.

On this basis, it is recommended that the fixed retailer cost for 2016-17 be set at the same level as the fixed retailer cost benchmarked for 2015-16. In the absence of any other information, further benchmarking could be undertaken to assess the indexation of the fixed retailer cost in future years. If benchmarking is not undertaken, it is proposed that the fixed retailer cost be indexed by CPI in subsequent years.

Indexing the variable retailer cost

To the extent that the variable retailer cost includes costs, rather than profit margin, these costs are expected to increase in line with the increase in the fixed retailer costs.

To the extent that the variable retailer cost includes the profit margin, it is expected that the profit margin will change in line with increases in the allowed costs (energy costs, network costs and retailer costs), with changes in the economic conditions, taxation rate, the asset base and the systematic risk associated with providing customer retail services.

The economic conditions, company taxation rate and systematic risk associated with providing customer retail services are relatively stable currently and therefore no change in the profit margin (as a percentage of total costs) is expected in the short term. However, the cost base to which the profit margin is applied will change in line with changes in the energy costs, network costs and retailer costs.

Further benchmarking could be undertaken to assess the indexation of the variable retailer costs in future years. If benchmarking is not undertaken, the variable retailer costs could be indexed in the short term so that the variable retailer costs as a percentage of the allowed costs remains unchanged. That is, the variable retailer costs would vary in line with changes in the energy costs, network costs and fixed retailer costs.

In the longer term, the variable retailer costs would need to be adjusted to take into consideration a change in the prevailing interest rates.



Following the introduction of full retail competition in the Queensland electricity market on 1 July 2007, all retail electricity customers in Queensland can choose to either:

- negotiate a market retail contract with a retailer and pay a price determined by that retailer, or
- remain on a standard retail contract with the price:
 - for customers in south east Queensland, determined by the retailer
 - for customers in regional Queensland, determined by the Minister or the Queensland Competition Authority (QCA), where that function has been delegated by the Minister under section 90(1) of the *Electricity Act 1994*.

The QCA has received a delegation from the Minister to determine the regulated retail electricity prices for regional Queensland for 2016-17.

The QCA is proposing to adopt a similar approach to previous years to determine the regulated retail electricity prices through a build-up of energy, network and retailer costs for a representative retailer. The QCA has proposed to define a representative retailer as a retailer that:

- is an incumbent retailer of sufficient size to have achieved economies of scale
- serves small and large retail customers in Queensland and other jurisdictions across the National Electricity Market (NEM)
- has a mix of market and non-market customers
- retails electricity on a standalone basis
- is not vertically integrated with an electricity generator.

Two of the components of the retailer cost are the retail operating cost (ROC) and the retail margin. The QCA has previously defined ROC and the retail margin as follows:

ROC are the costs associated with services provided by a retailer to its customers and typically include the costs associated with customer administration, call centres, corporate overheads, billing and revenue collection, IT systems, regulatory compliance, and customer acquisition and retention (CARC).¹²

The retail margin compensates retailers for their exposure to systematic risk associated with providing customer retail services.¹³

The retail margin has historically been set relative to the retailers' EBITDA (earnings before interest, tax, depreciation and amortisation) and therefore includes an allowance for tax, depreciation and amortisation, and a return to the retailers.

¹² Queensland Competition Authority, *Regulated retail electricity prices for 2015-16, Final determination*, June 2015, page 27

¹³ *Ibid*, page 31

In previous years, the QCA estimated the ROC and the retail margin based on benchmark observations of publicly available data and other regulatory decisions, predominantly those of the Independent Pricing and Regulatory Tribunal (IPART).

With a number of jurisdictions having now deregulated their retail electricity markets, existing sources of benchmark data have aged and are less suitable for the QCA's purposes. For these reasons, the QCA is conducting a comprehensive review of the retailer costs for the 2016–17 review of regulated electricity tariffs.

ACIL Allen Consulting (ACIL Allen) has been engaged by the QCA to estimate the efficient retailer costs for a representative electricity retailer serving residential and business customers in Queensland as part of the 2016-17 review of regulated electricity tariffs.

A methodology paper, which sets out how we propose to estimate the retailer costs for different customer segments, was published by the QCA on 11 December 2015. Submissions on the methodology paper have been taken into consideration in finalising the methodology.

Purpose and overview of this report

The methodology that has been adopted to estimate the efficient retailer costs for a representative retailer serving residential and business customers in Queensland is described in chapter 2.

The inputs to the benchmarking analysis are provided in chapter 3 and the results from the benchmarking analysis are provided in chapter 4.

The information provided by the retailers, and our bottom-up analysis of that information, is provided in chapter 5.

Chapter 6 draws together the benchmarking analysis in chapter 4 and the bottom-up analysis in chapter 5 to identify the appropriate definition for a small, large and very large customer, and to identify the relationship between the efficient fixed and variable components of the retailer costs for small customers, and for large and very large customers.



This chapter describes the methodology that has been adopted to estimate the efficient retailer costs.

The Australian Energy Market Commission's (AEMC's) advice on a best practice methodology for setting efficient retailer costs is summarised in section 2.1. An overview of our methodology is provided in section 2.2, with further detail provided on the benchmarking analysis in section 2.3, the bottom-up analysis in section 2.4, and the indexing of the fixed and variable components of the retailer costs in section 2.5.

2.1 Best practice methodology for estimating the efficient retailer costs

In 2013 the AEMC published advice on a best practice methodology for setting regulated retail electricity prices for small customers.

The AEMC identified two methods for setting an efficient retailer cost:

- a **benchmarking** approach, which involves examining publicly available information on retail operating costs, either from publicly listed companies and/or other regulatory decisions
- a **bottom-up** approach, which involves requesting retailers to provide information on their operating costs.¹⁴

The AEMC recommended that the regulator use both benchmarking and a bottom-up assessment as tools in assessing an efficient retail operating cost.

Consistent with this recommendation, we have used both benchmarking and a bottom-up assessment to estimate an efficient fixed component of retailer costs for a representative electricity retailer serving residential and business customers in Queensland in 2016-17.

The AEMC identified three methods typically used to estimate the retail margin:

- an expected returns approach, which determines a margin that compensates retailers for the systematic risk associated with the expected cash flows
- a bottom-up approach, which estimates a retailer's asset base and its estimated cost of capital, and then determines the earnings and revenue that would allow the retailer to earn an expected return equal to its estimated cost of capital
- a benchmarking approach, which examines the reported margins of comparable listed firms by observing public data from stock exchanges.

The AEMC considered that no one method can be relied upon to estimate a retail margin.

¹⁴ Australian Energy Market Commission, *Advice on best practice retail price methodology*, Final report, page 60

The expected returns approach “places high reliance on the economic theory of the Capital Asset Pricing Model and an estimated relationship between profitability of electricity retailers and economic conditions”¹⁵.

The bottom-up approach relies on market data to estimate a retailer’s asset base, which may be difficult as retailers typically have small tangible asset bases. In 2013, IPART’s bottom-up estimate was derived from “just 12 transactions over 14 years”¹⁶.

It may be difficult to identify direct comparators for benchmarking purposes. In 2013, IPART derived an estimate of the retail margin from a sample of listed retailers in industries other than electricity. The sample included retailers in Australia, Canada, New Zealand, UK and USA in the following industry segments – drug retailers, food retail and wholesale, apparel retailers, headline retailers, home improvements, and specialty retailers. While this approach allowed analysis for a large sample, it was “limited by lack of comparability”¹⁷.

The AEMC therefore recommended that the estimate of retail margin should be guided by a retail margin objective:

The efficient margin is to be commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk as that which applies to the retailer in respect of the provision of regulated electricity services.

The AEMC was of the view that the decision should be guided by the following principles:

- a range of estimation methods, financial models, market data and other evidence should be considered
- the retail margin should be capable of responding to changes in market conditions
- any interrelationships between estimates of financial parameters that are relevant to the estimates of the return on equity and return on debt should be considered.

2.2 Overview of our methodology

This section provides an overview of the methodology we have applied to estimate an efficient retailer cost. An overview of the benchmarking approach is provided in section 2.2.1 and the bottom-up approach in section 2.2.2. Section 2.2.3 provides an overview of the way in which these approaches are used to estimate an efficient fixed and variable component of the retailer costs. High level comments by stakeholders on the methodology are provided in section 2.2.4.

The methodology is described in more detail in subsequent sections.

2.2.1 Benchmarking approach

Over the last couple of years, retail electricity prices have been deregulated in NSW and South Australia, and they have been deregulated in Victoria for some years. Across these three jurisdictions, there are nine electricity distribution areas¹⁸, each with at least nine active retailers¹⁹, many of which have multiple tariff offerings publicly available for residential and small business customers.

While retail prices continue to be regulated in Queensland, around 70 per cent of customers in south east Queensland²⁰ are now on market offers.²¹

There is therefore now a rich set of Australian data available in competitive retail electricity market environments in NSW, Queensland, South Australia and Victoria that can be used to benchmark an efficient retailer cost.

¹⁵ SFG Consulting, *Estimation of the regulated profit margin for electricity retailers in New South Wales*, 4 June 2013, page 2

¹⁶ *Ibid*, page 3

¹⁷ *Ibid*, page 2

¹⁸ Five in Victoria (AusNet Services, CitiPower, Jemena, Powercor and United Energy), three in NSW (AusGrid, Endeavour Energy and Essential Energy) and one in South Australia (SA Power Networks).

¹⁹ AGL, Origin Energy, Energy Australia, Simply Energy, Lumo Energy, Red Energy, Alinta, M2 Energy and Momentum.

²⁰ In Energex’s electricity distribution area.

²¹ The retailers active in south east Queensland are AGL, Origin Energy, Energy Australia, Click Energy, Lumo Energy, and M2 Energy.

We have used this data to benchmark the efficient retailer cost for residential and small business customers in Queensland. This required careful consideration of:

- the costs incurred in other jurisdictions that are not incurred in Queensland
- the costs incurred in Queensland that are not incurred in other jurisdictions
- differences in the average consumption across jurisdictions
- differences in the rate of churn of customers across jurisdictions
- differences in the timing in setting retail tariffs, which relates to differences in the timing in setting network tariffs – while network tariffs in Queensland, NSW and South Australia are updated each financial year, network tariffs in Victoria are updated each calendar year.

The fixed retailer cost and variable retailer cost are closely related. The allocation of costs between the two categories may sometimes be arbitrary and for a given retailer may change over time. A retailer could, for example, invest in IT and increase the level of automation in the business, which may decrease the fixed component (the costs to serve a customer) and increase the variable component (the return on and of the IT assets).

Retail electricity tariffs for large business customers are often subject to negotiation between retailers and customers, and are thus not generally available in the public domain to enable benchmarking. We have provided advice on the efficient retailer cost for large and very large customers based on the benchmarking of retail tariffs for residential and small business customers and bottom-up analysis of data provided by the retailers.

Further detail on our benchmarking approach is provided in section 2.3.

2.2.2 Bottom-up analysis

We requested detailed information from the retailers on their forecasts of the retail operating costs and retail margin to be able to assess those estimates on a bottom-up basis.

We sought financial information as well as a range of metrics, cost allocation methodologies and a reconciliation between the retailer's publicly available retail operating cost and retail margin and their cost estimates, so that we were able to undertake the analysis. We sought historical information as well as projected information.

We used the bottom-up analysis to:

- disaggregate the retailer costs
- validate and cross-check the fixed and variable components of the retailer cost estimated using the benchmarking approach
- identify whether there are any cost drivers which would indicate that the efficient costs for providing retail electricity services in Energex's distribution area are different to the efficient costs for providing retail electricity services in Ergon Energy's distribution area, and if so, the extent to which the costs are different
- identify the appropriate definitions of small, large and very large customers on the basis of the way in which customers of increasing size are managed by the retailer
- estimate the additional efficient retailer costs required to service large and very large customers.

Further detail on our bottom-up approach is provided in section 2.4.

2.2.3 Estimate of the efficient retailer costs

We estimated the efficient fixed retailer cost for residential and small business customers. The fixed retailer cost was estimated based on the benchmarking of retail market offers, a bottom-up analysis of the estimates provided by the retailers, and publicly available information on the retailers' cost to serve. The fixed retailer cost was estimated on the basis of an amount per customer.

We estimated the efficient variable retailer cost for residential and small business customers. The variable retailer cost was estimated based on the benchmarking of retail market offers and a bottom-up analysis of the estimates provided by the retailers.

The retailers provided their historical and, in some cases, forecast retailer costs for large and very large customers.

The use of multiple approaches is consistent with the AEMC's recommendations.

2.2.4 Stakeholder submissions

Origin Energy (Origin) submitted that its:

... preferred approach to determine a representative retailers costs is to use the current Queensland retail operating cost benchmark and to escalate this allowance on an annual basis²²

and

... believes the current margin of at least 5.7 per cent is appropriate.²³

The methodology that has been adopted to estimating the retailer cost is consistent with the AEMC's advice on a best practice method. The efficient fixed and variable components of the retailer cost estimated using this methodology are compared with the current Queensland retail operating cost benchmark and retail margin in chapter 4.

That said, Origin supported our methodology to adopt a benchmarking approach to assess the retailer cost in aggregate, to account for different accounting methodologies, informed by the cost information provided by the retailers:

... relying on data provided by retailers to determine an appropriate retailer operating cost is problematic as retailers have different accounting methodologies and how they allocate costs to electricity and gas customer.

The potential to have large discrepancies in supplied operating costs was evident in 2015-16 when the QCA analysed the actual retail costs for Origin and AGL. Origin Energy's reported costs were \$169 per customer in 2013-14 and AGL's reported costs were \$102 per customer – these differences arose from how costs were allocated. We thus believe a benchmarking approach with some comparison to actual costs to assure validity is the most effective mechanism to determine these costs.²⁴

By including a range of retailers, some of which retail electricity and some of which retail electricity and gas, in the benchmarking analysis we have been able to assess whether the fixed and variable components of the retailer cost vary due to a different allocation of costs.

Similarly Ergon Energy Queensland (EEQ) supported using both benchmarking and bottom-up analysis to estimate an efficient retail operating cost. It recognised that:

Relying solely on a bottom-up approach may not facilitate the estimation of efficient representative retailer ROC. Additionally, the transition to the recently implemented [National Energy Customer Framework] NECF may distort the outcomes of a bottom-up approach.²⁵

While EEQ has concerns with the bottom-up approach and that "changes in the regulatory and market environment may inhibit the application of a benchmarking approach"²⁶, it "does not believe that any alternative methods to estimating retail margin need to be considered"²⁷.

QCOS suggested that we:

...should also attempt to verify the costs derived in the bottom up analysis independently of retailers, as a way of demonstrating and providing confidence that the estimates of the ROC and retail margins are robust²⁸.

Similarly, the Queensland Consumers Association (the Association) identified that:

²² Origin Energy, submission to the QCA's Interim Consultation Paper, 29 January 2016, page 3

²³ Ibid, page 4

²⁴ Ibid, page 3

²⁵ Ergon Energy Queensland, submission to the QCA's Interim Consultation Paper, 20 January 2016, page 10

²⁶ Ibid

²⁷ Ibid

²⁸ Queensland Council of Social Service, submission to the QCA's Interim Consultation Paper, page 5

... the usefulness of [a] bottom up approach depends entirely on sufficient relevant retailers voluntarily supplying the required information.²⁹

We have not independently verified the costs derived in the bottom-up analysis as the benchmarking analysis provides an alternative source of data to assess an efficient fixed and variable component of the retailer cost. The benchmarking analysis addresses any limitations in the data that the retailers were compelled to provide to the QCA under the *Electricity Act 1994*.

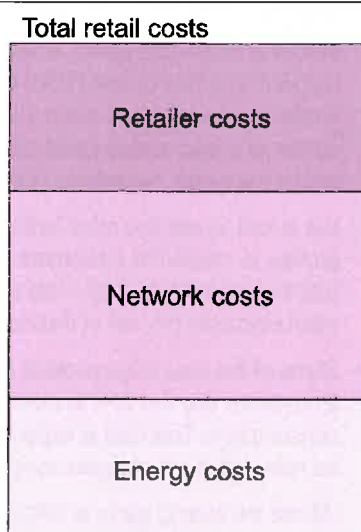
2.3 Benchmarking retailer costs

This section provides more detail on the methodology adopted to benchmark retailer costs.

We estimated the efficient retailer costs for residential and small business customers by deconstructing the components of retail electricity tariffs that are available in jurisdictions with competitive retail electricity markets, and benchmarking the retailer costs.

As illustrated in Figure 2.1, retail electricity tariffs comprise three broad components – network costs, energy costs and retailer costs (fixed and variable components). By deducting the network costs and energy costs from the retail electricity tariff, the retailer costs can be derived.

FIGURE 2.1 COMPONENTS OF THE RETAIL ELECTRICITY TARIFF



These three broad components, as well as the total retail costs, are discussed in the following sections – the retail electricity tariffs are discussed in section 2.3.1, the network costs in section 2.3.2, the energy costs in section 2.3.3 and the retailer costs in section 2.3.4.

2.3.1 Retail electricity tariffs

The starting point for our benchmarking analysis was the market offers that are available in jurisdictions with competitive retail electricity markets. These offers have been used to calculate the annual retail electricity bills for residential and small business customers.

Which retailers were included in the analysis?

Where available, we used the retail electricity tariff offerings by the:

- three largest national retailers (AGL, Origin Energy and Energy Australia)
- the three largest “non incumbent” retailers (Simply Energy, Lumo Energy and Red Energy)
- four smaller retailers (M2 Energy (trading as Dodo Power & Gas), Alinta Energy, Momentum Energy and Click Energy)

²⁹ Queensland Consumers Association, submission to the QCA's Interim Consultation Paper, 18 January 2016, page 2

in each of the three electricity distribution areas in New South Wales, five electricity distribution areas in Victoria and the one electricity distribution area in South Australia, in our benchmarking analysis.

The retailers that are most active in south east Queensland, are different to those that are most active in other jurisdictions. For south east Queensland, we therefore used retail tariff offerings by the three largest national retailers (AGL, Origin Energy and Energy Australia), and the largest "non incumbent" retailers in south east Queensland (Click Energy, Lumo Energy and M2 Energy).

The Queensland Council of Social Service was concerned that:

... the market offers available in [South East Queensland] SEQ [should] form part of the QCA's consideration of the efficient costs of supply and not be based solely on "standing offers".³⁰

As discussed above, the benchmarking analysis is based on market offers, not standing offers.

Which tariffs were included in the analysis?

We used retail electricity tariffs for residential and for small business customers in our benchmarking analysis.

We used the retail electricity tariffs that were offered for the 2015-16 financial year in NSW, Queensland and South Australia and the retail electricity tariffs that were offered in the 2015 calendar year in Victoria.

The retailers offer a range of competitive market tariffs to residential and small business customers, including single rate tariffs, which may have inclining and declining blocks, and an off peak rate; conventional time of use (TOU) tariffs; and "flexible" tariffs (in Victoria). We have used the single rate tariffs in our analysis to avoid the complexities associated with differences in the shape of a typical customer's load across jurisdictions. This implicitly assumes that the efficient cost to serve customers will be the same, regardless of the type of tariff that applies to a particular customer.

We aimed to use two retail tariffs per retailer and distribution area in our analysis – one tariff that applies to residential customers and one tariff that applies to small business customers. Where a retailer had multiple single rate tariffs available, we used the single rate tariff that resulted in the lowest retail electricity bill, net of discounts, on the basis that this is the most efficient tariff.

Some of the cost to serve retail electricity customers is a **fixed cost** – for example, the cost to invoice a customer and the cost to manage customers through a call centre is the same regardless of consumption. This cost is expected to be reflected in the fixed component of the retailer cost, but may be reflected in the variable component of the retail electricity tariff.

Where the cost to serve is reflected in the **variable** component of the retail electricity tariff, the retailer will convert the cost to serve to a per consumption charge. It is expected this conversion will be done based on the average consumption for customers on a particular tariff so that the costs are not over or under recovered.

The average consumption varies across network tariffs and electricity distribution area and therefore the rate at which the variable component of the cost to serve is converted to a per consumption charge varies across network tariffs and electricity distribution area. We have therefore calculated the total customer bills for each of the tariffs based on the average consumption for residential and small business customers that is relevant to each tariff in each electricity distribution area.

The retail electricity bills have been calculated exclusive of GST.

Treatment of discounts

Many retailers offer incentives and discounts that are not included in the retailers' published electricity tariffs. Retailer incentives can be in the form of cash incentives, vouchers, or percentage discounts on customer bills. Some incentives are unconditional on customer actions while other incentives are contingent on customers paying their bills on time, agreeing to online billing or paying via direct debit. The length of time over which discounts to bills are applied to retail tariffs can be limited and some discounts are only available when the contract is first entered into (upfront discounts).

³⁰ Queensland Council of Social Service, submission to the QCA's Interim Consultation Paper, page 3

In calculating customers' retail electricity bills we have included all conditional and unconditional discounts that are available to customers. We have amortised upfront discounts over a period consistent with the rate of customer switching in that jurisdiction.

2.3.2 Network costs

Network costs, which are regulated by the Australian Energy Regulator, comprise:

- network tariffs, which recover costs associated with the distribution and transmission networks
- jurisdictional scheme amounts, where these are not included in the network tariffs
- metering charges.

Network tariffs for residential and small business customers are publicly available across the ten electricity distribution areas we considered for our analysis.³¹

We chose the "standard" network tariff that is likely to be applied to residential and small business customers on a single rate tariff in each jurisdiction. We used the network tariffs that apply in 2015-16 in NSW, Queensland and South Australia and in 2015 in Victoria.

Consistent with our approach for calculating overall customer retail electricity bills, we calculated the network costs based on the average consumption that was relevant to that tariff and electricity distribution area, exclusive of GST.

The jurisdictional scheme amounts recover the costs associated with Feed-in Tariff payments made to customers with solar PV systems. Jurisdictional scheme amounts related to Feed-in Tariff payments are included in the network tariffs.

Our analysis of network costs also includes the "standard" metering charges that are paid by residential and small business customers in the respective electricity distribution area in 2015-16 in NSW, Queensland and South Australia and in 2015 in Victoria. The metering charges are higher for customers in Victoria as smart meters have been installed for all customers.

2.3.3 Energy costs

Energy costs comprise:

- wholesale energy costs for various demand profiles
- costs of complying with the Renewable Energy Target (RET)
- NEM fees, ancillary services charges and costs of meeting prudential requirements
- energy losses incurred during the transmission and distribution of electricity to customers.

We used the same methodology to estimate the energy costs for NSW, Queensland, South Australia and Victoria, as adopted for the QCA in its determination of regulated retail tariffs for Queensland between 2013-14 and 2015-16.

It is important to apply a consistent approach across the different jurisdictions. Any approach will have an inherent estimation error associated with it – but by using the same approach across the jurisdictions, the estimation error remains largely constant across the jurisdictions and therefore we can make meaningful inter-jurisdictional comparisons since the estimation errors will largely cancel.

In its submission, the Association expressed concern that the approach to estimating the retailer cost should ensure that there is no double counting.³² By using the same methodology to estimate the energy costs as adopted for the QCA in its determination of regulated retail tariffs for Queensland between 2013-14 and 2015-16, and which has also been adopted for the 2016-17 determination, the risk of double counting is mitigated.

The approach to estimating energy costs is designed to simulate the wholesale energy market from a retailing perspective, where retailers hedge the pool price risk by entering into electricity contracts with prices represented by the observable futures market data. Other energy costs are added to the wholesale energy costs and the total is then adjusted for network losses.

³¹ Nine electricity distribution areas in NSW, South Australia and Victoria, and one in Queensland.

³² Queensland Consumers Association, submission to QCA's Interim Consultation Paper, 18 January 2016, page 2

Described below is an outline of the approach for quantifying each of the energy cost components. Further details on the approach to calculating energy costs is provided in ACIL Allen's June 2015 report to the Queensland Competition Authority *Estimated Energy Costs, 2015-16 Retail Tariffs*.

Timing of the analysis

As mentioned in section 2.3.1, the analysis covered retail offers in NSW, Queensland and South Australia for the 2015-16 financial year, and retail offers in Victoria for the calendar year 2015. For internal consistency, we used the forecasts based on market modelling we undertook for the QCA in estimating the 2015-16 energy costs (for NSW, Queensland and South Australia), and a combination of the forecast for 2015-16 and 2014-15 for Victoria (to give a calendar year forecast), rather than using actual market outcomes (to date) or a more up to date set of market based modelling forecasts.

Although at face value, it may seem appealing to have used a more up to date forecast to underpin the energy cost analysis, this would have created an inconsistency as we are attempting to mimic what retailers were forecasting for the wholesale outcomes at the time they were undertaking their hedging for 2015 and 2016, that is, prior to making their offers available to the retail market.

Wholesale energy costs

As with the 2013-14, 2014-15, and 2015-16 reviews for the QCA, we used the market hedging approach for estimating the wholesale energy costs (WEC).

We utilised the:

- stochastic demand model to develop 44 weather influenced simulations of hourly demand traces for each of the Net System Load Profile (NSLP) profiles in NSW, Queensland, South Australia and Victoria – using temperature data from 1970-71 to 2013-14 and demand data for 2010-11 to 2013-14
- stochastic outage model to develop 11 power station availability simulations
- energy market models to run 484 simulations of hourly pool prices of the NEM using the stochastic demand traces and power station availabilities as inputs
- analysis of contract data to estimate contract prices
- hedge model, taking the above analyses as inputs, to estimate a distribution of hedged prices for each NSLP.

We then analysed the distribution of outcomes produced by the above approach to provide a risk adjusted estimate of the WEC for each NSLP.

We relied on the Australian Energy Market Operator (AEMO) as a source for the various demand data, (NSLPs) required for the analysis. The QCA provided access to ASX Energy data for the purpose of estimating contract prices within each region.

The peak demand and energy forecasts for the demand profiles are referenced to the 2013 and 2014 AEMO demand forecasts for each region. The demand forecasting process then linked past trends and relationships between the NSLPs and the corresponding regional demand to produce a forecast of the NSLP profile for each region for 2015-16 (and 2014-15 for Victoria). This is an important step for Victoria, in particular, as the number of households remaining "in" the NSLP has reduced since 2009 with the roll-out of smart meters.

The forecast of the NSLPs also takes into account the projected growth in rooftop PV installations.

Renewable energy policy costs

Energy costs associated with the Large-scale Renewable Energy Target (LRET) and the Small-scale Renewable Energy Scheme (SRES) have been estimated using price information from the Australian Financial Markets Association (AFMA) and renewable energy percentages published by the Clean Energy Regulator (CER) at the time of the 2015-16 analysis undertaken for the QCA. Retailer compliance with these schemes operates on a calendar year basis and hence estimates are required for both 2015 and 2016 calendar years, with the costs averaged to estimate the 2015-16 financial year costs for NSW, Queensland and South Australia (and the 2015 calendar year estimate has been used for Victoria).

To estimate the costs to retailers of complying with both the LRET and SRES, we use the following elements:

- historical Large-scale Generation Certificate (LGC) market prices sourced from AFMA
- currently legislated LRET GWh targets for 2015 and 2016
- official Renewable Power Percentage (RPP) for 2015 published by CER
- an estimate of the RPP for 2016
- binding Small-scale Technology Percentage (STP) for 2015 and non-binding STP for 2016 as published by the CER
- the fixed clearing house price for Small-scale Technology Certificates.

Contract price and LGC price data collection cut-off dates

We applied the same data collection cut-off dates, as for the QCA's 2014-15 and 2015-16 determinations, for electricity and LGC contract data.

Other energy costs

Market fees and ancillary service costs were estimated based on data and policy documents published by AEMO.

Prudential costs, both for AEMO and to support hedging, are more complex and needed to take into account:

- the AEMO assessed maximum credit limit
- the future risk-weighted pool price
- participant-specific risk adjustment factors
- AEMO published volatility factors
- futures market prudential obligation factors, including:
 - the price scanning range
 - the intra commodity spread charge
 - the spot isolation rate.

Network losses

The estimated wholesale energy costs resulting from the analysis were referenced to the corresponding Regional Reference Node. These estimates were adjusted for transmission and distribution losses associated with transmitting energy from the Regional Reference Node to end-users.

Distribution Loss Factors (DLF), for each electricity distributor, and average Marginal Loss Factors (MLF), for transmission losses from the node to major supply points in the distribution networks, were applied to the wholesale energy cost estimates to incorporate losses.

The MLFs and DLFs used in the calculations were based on the final 2015-16 MLFs and DLFs published by AEMO on 1 April 2015 (as well as the final 2014-15 MLFs and DLFs for Victoria).

2.3.4 Retailer costs

For each retail electricity tariff, we deducted the energy costs and network costs from the total retail electricity costs to derive the retailer costs.

Before the retailer costs were benchmarked, we normalised the retailer costs to take into consideration:

- the retailer costs incurred in other jurisdictions that are not incurred in Queensland – these costs were deducted from the retailer costs estimated for those jurisdictions
- the retailer costs incurred in Queensland that are not incurred in other jurisdictions – these costs were deducted from the retailer costs estimated for Queensland.

These costs are discussed in the following sections.

Any additional energy or network costs incurred in a particular jurisdiction were netted out by deducting the energy and network costs from the total retail electricity costs. As a result, they do not need to be separately accounted for in the normalisation process.

In its submission, QCOSS agreed that the costs incurred in other jurisdictions that are not incurred in Queensland would need to be taken into consideration. It noted that:

*... the Victorian retail energy market differs from the rest of the [National Electricity Market] NEM where the National Energy Customer Framework (NECF) operates and where there are schemes which may increase operating costs (such as costs associated with smart meters) which applies to retailers in Victoria only.*³³

Costs incurred in other jurisdictions that are not incurred in Queensland

The costs incurred in other jurisdictions that are not incurred in Queensland relate to state-based energy efficiency schemes, the rollout of smart meters in Victoria, and the application of a state-based regulatory regime in Victoria.

State-based energy efficiency schemes

The state based energy efficiency schemes that are in place in jurisdictions other than Queensland are the:

- New South Wales Energy Savings Scheme (ESS)
- South Australian Retailer Energy Efficiency Savings Scheme (REES)
- Victorian Energy Efficiency Target (VEET).

Retailers incur two types of costs under these schemes:

- costs associated with carrying out energy efficiency activities or, in the case of NSW and Victoria, the costs associated with sourcing certificates for these activities
- compliance costs associated with the scheme, including costs associated with auditing, record keeping, reporting and purchasing either certificates or energy savings activities.

We accounted for both of these costs in our analysis.

NSW Energy Savings Scheme

The ESS places an obligation on electricity retailers to obtain and surrender Energy Savings Certificates (ESC), which represent energy savings.

In its last review of regulated retail prices and charges for electricity, IPART proposed an indicative allowance of \$1.93 per MWh (real 2012-13) for compliance with the ESS for the 2015-16 regulatory period.³⁴

IPART regarded the spot market for ESS certificates as too thinly traded to arrive at an appropriate market estimate of the cost of an ESS certificate. In arriving at its estimate, IPART used the tax adjusted penalty price under the ESS scheme as a proxy for the cost of an ESC. IPART calculated the overall cost of compliance with the scheme by multiplying the tax adjusted penalty price by the compliance obligation (a percentage of liable electricity sales).

We obtained market data on the price of ESCs for the 12 month period up to May 2015 to inform an estimated price for certificates.

The administrative costs associated with the ESS are not publicly available. However, the costs can be estimated from a series of interviews undertaken with a subset of energy retailers on behalf of the Commonwealth Department of Climate Change and Energy Efficiency. The report estimated that the compliance cost was \$0.76 per certificate for the incumbent retailer and \$0.77 per certificate for other retailers (in 2012 dollars).³⁵ We have assumed a cost of \$0.77 per certificate for all retailers and indexed these costs by CPI to June 2015 dollars.

³³ Queensland Council of Social Service, submission to QCA's Interim Consultation Paper, page 5

³⁴ Review of regulated retail prices and charges for electricity from June 2013 to June 2016, Page 56

³⁵ NERA Economic Consultants and Oakley Greenwood, *Analysis of Compliance Costs for a National Energy Savings Initiative, Final Report* for the Department of Climate Change and Energy Efficiency, December 2012, page 21

The total retailer costs associated with the ESS have been estimated based on the total number of certificates required to be surrendered in 2015, the certificate cost and the compliance cost per certificate.

As part of the Information Request, we sought information from retailers on the costs associated with the ESS to further inform our estimate.

The costs associated with the ESS were deducted from the retailer costs estimated for retail tariffs in NSW.

South Australian Retailer Energy Efficiency Scheme

Under the REES, liable electricity retailers³⁶ have to conduct a set number of energy efficiency audits every year and achieve energy reduction targets by providing energy efficiency activities to customers, with a specific sub target for priority customers. Targets for a specific retailer are set with reference to a retailer's share of energy sales (electricity and gas) in South Australia in the preceding year.

Retailers that fail to meet their obligation under the scheme have to pay a base penalty of \$10,000 for failing to achieve their target, a penalty of \$500 per energy audit not undertaken, and pay \$70 per tonne of greenhouse gas emissions that was deemed to have been emitted as a result of not undertaking energy efficiency measures.

In 2010, the Essential Services Commission of South Australia (ESCOSA) included an allowance of \$12.55 per customer (in 2010 dollars) for the costs associated with REES in the regulated retail electricity price.³⁷ For the purposes of our analysis, we considered indexing this allowance based on:

- CPI from September 2010 to March 2015
- the change in the number of audits required from 2011 to 2015
- the change in the number of energy efficiency activities required from 2011 to 2015
- the increase in the number of electricity customers in South Australia from 30 June 2009 to 30 June 2014
- the weighted average increase in the certificate penalty price from 2011 to 2015 under the NSW and Victorian schemes (to take into consideration the maturity of the scheme and the likely increase in cost as lower cost activities are saturated).

The retailer costs have been converted to a per consumption figure by dividing by the average energy consumption for residential customers, estimated using the approach described in section 2.3.1.

As part of the Information Request, we sought information from retailers on the costs associated with REES to further inform our estimate.

The costs associated with REES were deducted from the retailer costs estimated for retail tariffs in South Australia.

Victorian Energy Efficiency Target

The VEET scheme places an obligation on large³⁸ energy retailers to surrender a certain number of energy efficiency certificates for every unit of energy sold. Each Victorian Energy Efficiency Certificate (VEEC) created under the scheme represents one tonne of avoided carbon emissions. The liability to surrender VEECs is expressed as a percentage of relevant electricity acquisitions.

We estimated the costs associated with VEET using the same approach as used to estimate the costs associated with the ESS.

We obtained market data on the price of VEECs for the 12 month period up to November 2014 to inform an estimated price for certificates.

The administrative costs associated with the VEET are not publicly available. We have used the same administrative cost as estimated for the ESS.

³⁶ Electricity retailers that sell to more than 5,000 residential customers or had electricity purchases exceeding 27,000 MWh

³⁷ Essential Services Commission of South Australia, *2010 Review of Retail Electricity Standing Contract Price Path, Final Inquiry Report & Final Price Determination*, December 2010, page A-89

³⁸ Electricity retailers selling more than 30,000 MWh or selling to more than 5,000 residential customers are liable under the scheme.

The total retailer costs associated with the VEET have been estimated based on the total number of certificates required to be surrendered in 2015, the certificate cost and the compliance cost per certificate.

As part of the Information Request, we sought information from retailers on the costs associated with the VEET to further inform our estimate.

The costs associated with VEET were deducted from the retailer costs estimated for retail tariffs in Victoria.

Metering costs

In Victoria, a government mandated roll-out of smart metering infrastructure imposes additional costs on retailers. While our analysis will be based on single rate tariffs, which do not require smart meters, retailers will need to maintain the infrastructure necessary to manage smart metering data. The costs for this infrastructure are recovered through retail tariffs.

There is no public information available on the additional costs incurred by Victorian electricity retailers arising from the installation of smart meters. We have analysed the difference between the retailer costs for Victoria and the other jurisdictions to estimate the additional costs associated with smart meters incurred by retailers in Victoria in 2015. As part of the Information Request, we also sought estimates from the retailers of the costs incurred in Victoria for managing metering data from smart meters.

We have made an adjustment to the retailer costs estimated for retail tariffs in Victoria to account for the costs associated with the infrastructure for smart metering data, based on the benchmarking analysis and information provided in the Information Requests.

Regulatory regime

The National Energy Customer Framework (NECF) has been implemented in NSW, Queensland and South Australia, but not Victoria. Stakeholders noted that the benchmarking analysis needed to consider the implementation of NECF.

It is unclear whether the retailer costs in Victoria are higher or lower than in other jurisdictions with a state-based regulatory framework applying in that state. There is no robust information on the cost differential between the states arising from the application of different regulatory frameworks. As with smart meters, we have analysed the results from the benchmarking analysis to make an adjustment to the retailer costs estimated for retail tariffs in Victoria to account for any difference.

Costs incurred in Queensland that are not incurred in other jurisdictions

The QCA recovers its costs through regulatory fees that are levied on the retailers. We have deducted the regulatory fees from the retail operating costs for the Queensland retail tariffs.

The fixed component of the efficient retailer cost has therefore been estimated exclusive of the QCA's regulatory fees.

2.3.5 Benchmarking retailer costs

The benchmarking data points were analysed to identify whether there were any outliers, and whether there were any systemic differences due to particular characteristics of retailers. The characteristics considered were the size of the retailer, whether the electricity distribution area is predominantly rural or urban, and the jurisdiction, including the rate of churn in each jurisdiction. Our findings of the benchmarking analysis are presented in chapter 4.

2.4 Bottom-up analysis

The bottom-up analysis considered the retail operating cost and retail margin forecast by retailers.

We developed an Information Request, in consultation with the relevant retailers, to collect the information required for the bottom-up analysis.

The retail operating cost varies depending on how a customer is managed by the retailer. For example, the costs for managing a small customer through a call centre are lower than the costs for managing a large customer through a dedicated account manager. The costs for invoicing a small customer quarterly are lower than the costs for invoicing a large customer monthly (or more frequently).

The Information Request sought information on the drivers that influence the costs incurred for different groups of customers. The aim was to inform the definition of the customer segments for which we estimated an efficient retailer cost.

Information was sought from retailers on the historical and forecast retailer cost by customer segment. The information was requested in the following cost categories:

- retail operating costs
 - customer service and contract management – call centre, account managers, other customer service costs
 - billing and payment – standard billing operations; bad debts, credit and collections; other billing and payment costs
 - acquisition and retention – channel costs, back office costs, marketing costs, other acquisition and retention costs
 - IT systems (operating cost only) – customer information and billing system, metering data system, other
 - energy procurement costs (the costs of procuring energy and excluding the cost of wholesale energy purchased, hedge costs and prudential costs, which are included in the energy costs)
 - regulatory compliance costs
 - regulatory fees
 - support and overheads
 - other
- retail margin
 - depreciation of assets
 - amortisation
 - interest
 - tax
 - return on tangible assets
 - return on intangible assets
 - other.

For each of the cost categories, the Information Request sought information on the allocators that are used to allocate costs to each of the different customer segments, and the data used to allocate the costs including, as a minimum, the energy consumption and the number of customers in that customer segment.

The purpose of collecting this information was to identify how the costs vary across different customer segments so that estimates of the retailer cost could be determined for the different customer segments, as relevant.

The information provided by the retailers was analysed to:

- derive a forecast fixed component of the retailer cost that is comparable to that produced through the benchmarking approach
- disaggregate the retailer costs into its components
- assess whether the retailer costs estimated from the benchmarking have appropriately considered the costs that are incurred in Queensland and not in other jurisdictions
- assess the additional retailer costs required for larger customers
- assess whether the retailer cost will be different in Ergon's distribution area and Ergon Energy's distribution area.

The Information Request also sought the costs incurred by the retailers in other jurisdictions but not Queensland (for state-based energy efficiency schemes and the infrastructure to manage smart meter data in Victoria) and a reconciliation between the retailer's publicly stated retail operating cost and the

cost information provided. The costs incurred in other jurisdictions were sought to inform the benchmarking, and the reconciliation between the publicly stated retail operating cost and the cost information provided was to inform our analysis of the costs.

2.4.1 Stakeholder submissions

Origin submitted that the:

ROC should include categories such as billing, customer call centre, credit management, energy trading activities, corporate overheads, IT systems and other costs (ie Ombudsman costs, depreciation). We believe ROC needs to recognise that each retailer has different cost categories in relation to capital and operating costs and Origin believes that both costs need to be recognised. Origin supports ACIL Allen Consulting's proposal to include QCA regulatory fees as a separate ROC item.

In addition, Origin supports the QCA's proposal to include customer acquisition and retention costs (CARC) as part of ROC.³⁹

Similarly, EEQ recommended that the following costs, as a minimum, be included in the ROC:

- customer administration
- call centres
- corporate overheads
- billing and revenue collection
- IT systems
- regulatory compliance
- customer acquisition and retention costs.⁴⁰

EEQ was also of the view that depreciation and amortisation costs should be included in the ROC rather than the retail margin.⁴¹

The cost categories identified by Origin and EEQ were included in the Information Request. The depreciation cost was requested as a component of the retail margin rather than the ROC. However, by requesting a breakdown of the costs by cost category, we were able to assess whether the depreciation and amortisation costs should be included in the calculation of the fixed or variable component of the retailer cost.

EEQ supported our view that the retailer costs will vary by customer segment.

The requirements of large and very large customers often results in more tailored product offerings and bespoke servicing. This impacts operational activities across multiple functions within a business including,

- *Customer administration (call centre specialists and dedicated customer service representatives)*
- *Trading*
- *Billing and revenue collection*
- *CARC.⁴²*

2.5 Indexing the retailer costs

The retailer costs estimated through the benchmarking analysis were indexed so that they could be directly compared across jurisdictions and with the forecast retailer costs as forecast by the retailers. In addition, part of our brief is to consider methods by which our estimates for the efficient retailer costs for 2016-17 could be indexed to provide estimates for future years.

The approach to indexing the benchmarked retailer costs is discussed in section 2.5.1, and the approach to indexing the fixed and variable component of the retailer costs in future years is discussed in sections 2.5.2 and 2.5.3, respectively.

³⁹ Origin Energy, submission to QCA's Interim Consultation Paper, 29 January 2016, page 3

⁴⁰ Ergon Energy Queensland, submission to QCA's Interim Consultation Paper, 20 January 2016, page 7

⁴¹ Ibid, page 11

⁴² Ergon Energy Queensland, submission to QCA's Interim Consultation Paper, 20 January 2016, page 8

2.5.1 Indexing the benchmarked retailer costs

The retailer costs will vary from year to year based on the increase in input costs and any improvements in productivity.

In its advice on best practice retail price methodology, the AEMC identified several alternatives for how retailer operating costs can be escalated⁴³:

- use of a general cost escalator – either the CPI or a wage index
- use of a specific cost index, targeted to electricity retail operating costs.

The AEMC identified that a productivity improvement factor could also be considered, to take into account that retailers become more efficient in providing services for customers.

The AEMC recommended that costs be escalated using CPI rather than a wage index as it considered that the wage index does not reflect non-labour costs and does not account for improvements in labour productivity. The AEMC considered that it would be administratively complex to develop a specific cost index.

We do not have sufficient information for each of the approximately 170 retailer tariffs used in the benchmarking analysis to index them using a wages index, taking productivity improvements into consideration.

Where applicable, we have therefore indexed the retailer costs estimated for NSW, Queensland and South Australia for 2015-16 and the retailer costs estimated for Victoria for 2015, by CPI. We have used the CPI for all groups, weighted average of eight capital cities.⁴⁴

2.5.2 Indexing the fixed component of the retailer costs for future years

There are two broad approaches to index the fixed component of the retailer costs for future years. One approach is to rerun the models with the latest information on energy costs, network tariffs and retail tariffs. The second approach is simply to index the fixed component of the retailer costs that is estimated for 2016-17.

As the representative retailer has been defined as a retailer that has achieved economies of scale, it is assumed that the fixed component (on a per customer basis) will not vary as the number of customers changes.

As discussed above, the fixed component of the retailer costs can be escalated using CPI, a wage index, or a specific cost index, offset by productivity improvements.

A retailer may choose to invest in information technology to reduce operating costs. As part of the bottom-up analysis we sought information on the expected productivity improvements in the short term (three to five years).

We also sought estimates of the proportion of the input costs that are labour and non-labour so that different indices could be applied to each.

Stakeholder submissions

Origin has suggested that a simple methodology be developed for indexing the retail operating costs.

For example, the QCA's current approach of escalating ROC based on the consumer price index. However, if an annual escalation method is used, then there would need to be a provision to take into account one-off changes to retail costs because of new regulatory or compliance obligations in the Queensland market.⁴⁵

EEQ is of the view that any escalation should not take into account potential productivity gains.

EEQ agrees that a prudential operator will become more efficient over time but only to the extent that their operating environment remains reasonably stable.

⁴³ Australian Energy Market Commission, *Advice on best practice retail price methodology, Final report*, 27 September 2013, page 61

⁴⁴ ABS (2015), 6401.0 - Consumer Price Index, Australia, Jun 2015, released 22 July 2015

⁴⁵ Origin Energy, submission to QCA's Interim Consultation Paper, 29 January 2016, page 3

Emerging trends in non-traditional products combined with a developing regulatory environment is resulting in fundamental changes to retail operating models.

EEQ's view is that these influences will persist at least in the medium term. This will make it extremely difficult to realise productivity gains that may otherwise be achievable in stable market environments.⁴⁶

Conversely, QCOSS submitted that:

... there should be some factor built into this exercise that takes into account that retailers will become more competitive over time, and hence more efficient, which should result in a real decrease over time, rather than an escalation (all other things constant).⁴⁷

Similarly, the Association:

... strongly supports incorporating a productivity adjustment factor into any annual escalation formula for ROC.⁴⁸

The indexing of the fixed component of the retailer costs is discussed further in section 6.4.

2.5.3 Indexing the variable component of the retailer costs in future years

The variable component of the retailer costs is expressed on a per consumption basis, and includes the retailer's variable costs and the retailer's margin.

The retailer's variable costs will increase in a similar way to the fixed component of the retailer costs.

The retailer's profit margin will vary with:

- changes in economic conditions
- changes to the taxation rate
- changes to the asset base.

Our advice to the QCA on an appropriate methodology for indexing the variable component of the retailer costs is informed by the information provided by the retailers.

The Association submitted that:

It is also important that the retail margin be closely examined annually to ensure that full account is taken of changes in factors that influence it.⁴⁹

The indexing of the variable component of the retailer costs is discussed further in section 6.5.

2.6 Estimating the efficient retailer costs

The benchmarking and bottom-up analyses have informed a judgement on estimates of the efficient retailer for the relevant customer groups. The fixed component of the retailer costs is expressed on a per customer basis and the variable component of the retailer costs is expressed on a per consumption basis.

The way in which the information provided has been considered in assessing the efficient retailer costs is summarised in Figure 2.2.

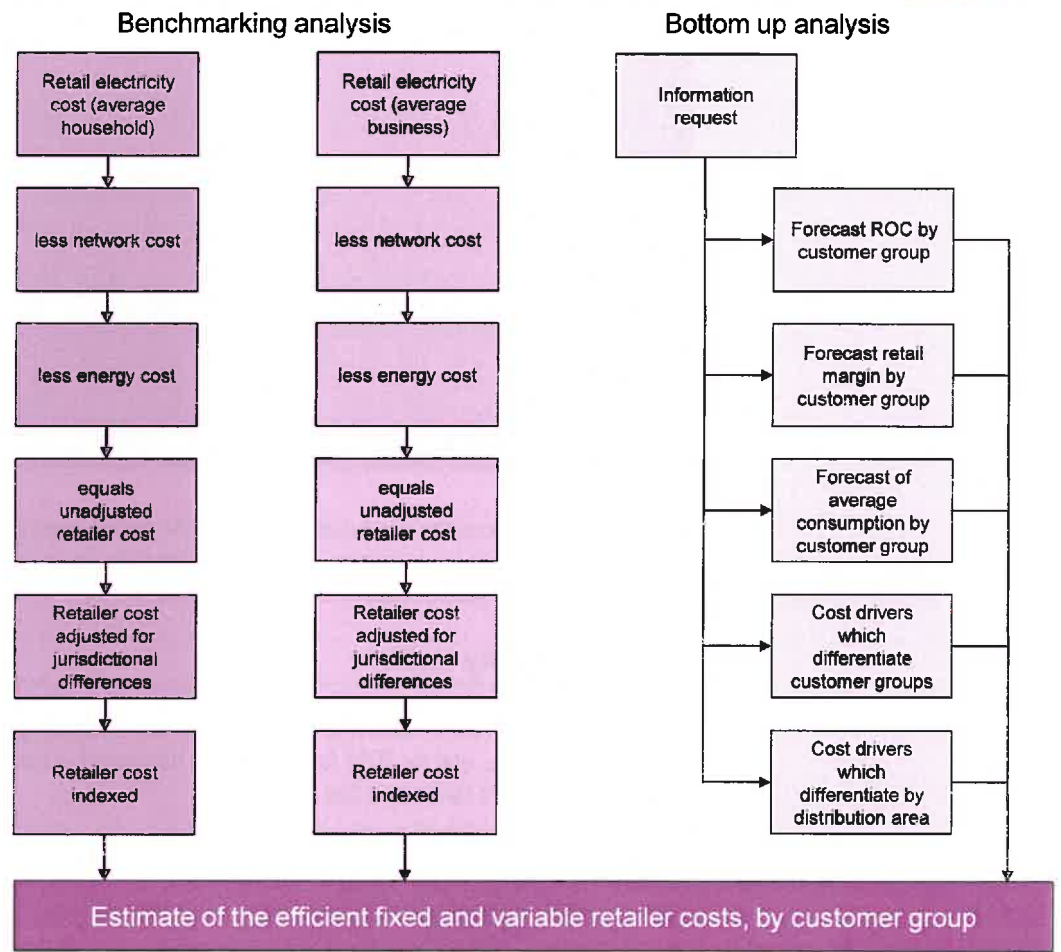
⁴⁶ Ergon Energy Queensland, submission to QCA's Interim Consultation Paper, 20 January 2016, page 10

⁴⁷ Queensland Council of Social Service, submission to QCA's Interim Consultation Paper, page 5

⁴⁸ Queensland Consumers Association, submission to QCA's Interim Consultation Paper, 18 January 2016, page 2

⁴⁹ Ibid

FIGURE 2.2 ESTIMATING THE EFFICIENT RETAILER COST





3

BENCHMARKING INPUTS

This chapter describes the input data for the benchmarking analysis. The input data relating to retail electricity tariffs is set out in section 3.1, the network costs in section 3.2, the energy costs in section 3.3 and the retailer costs in section 3.4.

3.1 Retail electricity tariffs

We obtained a data set of residential tariffs from Alvis Consulting for 2015-16 for NSW, Queensland and South Australia, and for 2015 for Victoria. As discussed in section 2.3.1, we did not include time of use tariffs. The retail tariffs included those with:

- a single energy consumption rate
- an inclining block tariff or a declining block tariff
- different rates that applied in summer and non-summer periods.

The number of residential retail electricity tariffs that were sourced for each retailer in each electricity distribution area is summarised in Table 3.1. A full list of residential retail tariffs sourced is provided as Appendix A.

TABLE 3.1 NUMBER OF RESIDENTIAL RETAIL ELECTRICITY TARIFFS SOURCED

Retailer	NSW		Qld		South Australia		Victoria			
	Ausgrid	Endeavour Energy	Essential Energy	Energex	SA Power Networks	AusNet Services	CitiPower	Jemena	Powercor	United Energy
AGL	4	4	4	4	4	4	4	4	4	4
Alinta Energy					2	2	2	2	2	2
Click Energy	6	6	6	7		5	5	5	5	5
Dodo Power & Gas	1	1	1	1	1	1	1	1	1	1
Energy Australia	4	4	3	3	6	5	5	5	5	5
Lumo Energy				4	5	4	4	4	4	4
Momentum	2	2	2		3	2	2	2	2	2
Origin	4	4	4	3	4	4	4	4	4	4
Red Energy	2	2	2		2	2	2	2	4	2
Simply Energy	1	1	1	1	5	8	8	8	8	8
Total	24	24	23	23	32	37	37	37	39	37

Where available, we collected one small business retail electricity tariff for each retailer in each electricity distribution area from the retailers' websites in late 2015/early 2016. The small business retail tariffs that were sourced are summarised in Table 3.2. A full list of small business retail tariffs sourced is provided as Appendix A.

TABLE 3.2 SMALL BUSINESS RETAIL ELECTRICITY TARIFFS SOURCED

Retailer	NSW			Qld	South Australia	Victoria				
	Ausgrid	Endeavour	Essential	Energex	SA Power Networks	AusNet Services	CitiPower	Jemena	Powercor	United Energy
AGL	X	X	X	X	X	X	X	X	X	X
Alinta Energy					X	X	X	X	X	X
Click Energy				X						
Dodo Power & Gas						X	X	X	X	X
Energy Australia		X	X	X	X	X	X	X	X	X
Lumo Energy	X	X	X	X	X	X	X	X	X	X
Momentum	X	X	X		X	X	X	X	X	X
Origin	X	X	X	X	X	X	X	X	X	X
Red Energy	X	X	X		X	X	X	X	X	X
Simply Energy	X	X	X		X	X	X	X	X	X
Total	6	7	7	5	8	9	9	9	9	9

3.1.1 Average consumption

The average consumption varies across network tariffs in each of the electricity distribution areas, and therefore the rate at which the variable component of the cost to serve is converted to a per consumption charge varies across network tariffs in each of the electricity distribution areas. In calculating the total customer electricity bills, other than those in Energex's distribution area, we have used the average consumption for the relevant network tariff in the specific electricity distribution area, where this is available, and the average consumption for the class of customer in the electricity distribution area, where the data is not available by network tariff.

We have used the average consumption as provided by QCA for residential and small business customers in Energex's distribution area.

The average consumption for residential customers and small business customers used in each network area, and the source for this data, is shown in Table 3.3.

TABLE 3.3 AVERAGE CONSUMPTION BY DISTRIBUTOR

State	Distributor	Average consumption	Source
kWh per annum			
Small business customers			
NSW	Ausgrid	18,697	Economic benchmarking RIN – 30 October 2015 (total non residential not on demand tariff)
NSW	Endeavour	26,799	Economic benchmarking RIN – 24 November 2015 (total non residential not on demand tariff)
NSW	Essential Energy	21,257	Economic benchmarking RIN – 27 November 2015 (total non residential not on demand tariff)
QLD	Energex	16,370	As advised by QCA (T20 EGX)
SA	SA Power Networks	22,353	PTRM, final determination 2015-20
VIC	AusNet Services	8,003	PTRM, revised regulatory proposal 2016-20
VIC	CitiPower	14,729	PTRM, revised regulatory proposal 2016-20
VIC	Jemena	11,534	PTRM, revised regulatory proposal 2016-20
VIC	Powercor	6,571	PTRM, revised regulatory proposal 2016-20
VIC	United Energy	23,417	Economic benchmarking RIN – 2014 (total non residential not on demand tariff)
Residential customers			
NSW	Ausgrid	5,746	Economic benchmarking RIN – 30 October 2015 (total residential)
NSW	Endeavour	6,528	Economic benchmarking RIN – 24 November 2015 (total residential)
NSW	Essential Energy	6,140	Economic benchmarking RIN – 27 November 2015 (total residential)
QLD	Energex	4,640	As advised by QCA (T11 EGX)
SA	SA Power Networks	4,404	PTRM, final determination 2015-20
VIC	AusNet Services	4,553	PTRM, revised regulatory proposal 2016-20
VIC	CitiPower	4,246	PTRM, revised regulatory proposal 2016-20
VIC	Jemena	4,198	PTRM, revised regulatory proposal 2016-20
VIC	Powercor	4,240	PTRM, revised regulatory proposal 2016-20
VIC	United Energy	4,256	PTRM, revised regulatory proposal 2016-20

SOURCE: ACIL ALLEN ANALYSIS OF POST TAX REVENUE MODELS SUBMITTED TO THE AER AND ECONOMIC BENCHMARKING REGULATORY INFORMATION NOTICES (RIN)

While the electricity consumed varies from month to month, our analysis indicates that the electricity consumption on a quarterly billing cycle for small customers is relatively consistent through the year. For the purposes of our analysis, the electricity consumption is assumed to be consistent through the year where the variable charge is the same throughout the year.

The variable component of the tariffs in SA Power Network's and United Energy's distribution areas is higher in summer than the rest of the year. We have adjusted the average network tariff paid by customers in these distribution areas by weighting the network tariffs during the summer and non summer periods by the relative consumption of customers during those periods.

3.1.2 Treatment of discounts

Where retailers have offered discounts on one or more components of the retail electricity bill, we have calculated the retail electricity bills net of these discounts. Where the discounts apply to the usage charges, we have applied the discount to the variable component of the bill. Where the discounts apply to the total electricity bill, we have applied the discounts to the variable and fixed components of the bill.

Where retailers have offered upfront discounts, we have amortised the discounts over a period of time, based on the rate of churn in the jurisdiction, and applied the discount to the fixed component of the bill.

We have sourced the churn rate for each jurisdiction from AEMO. As the churn rates are on a jurisdiction basis rather than an electricity distribution area basis, the churn rate will be overstated for some electricity distribution areas and understated for other electricity distribution areas. For example, the churn rate in the Energex distribution area is likely to be higher than the churn rate for Queensland. We expect these errors to be immaterial given the extent to which retailer costs are averaged in our benchmarking.

We converted the churn rate in each jurisdiction to the implied period of time a customer will stay with a retailer in that jurisdiction. We have then amortised the discount over this period using a discount rate of 8.47 per cent to calculate a capital recovery rate. The capital recovery rate is the proportion of the discount that has been applied in each year in determining the net retail electricity bill.

The assumed switching rates and capital recovery factors are shown in Table 3.4.

TABLE 3.4 FACTORS FOR APPLYING UPFRONT DISCOUNTS TO RETAIL ELECTRICITY BILLS

	NSW	Qld	SA	VIC
Annualised churn rate	18%	12%	16%	26%
Implied average period a customer stays with one retailer (years)	5.56	8.33	6.25	3.85
Capital recovery factor	0.23	0.17	0.21	0.32

Note: Assumes a weighted average cost of capital of 8.47%

SOURCE: ACIL ALLEN ANALYSIS OF NEM MONTHLY RETAIL TRANSFER STATISTICS, AEMO, DECEMBER 2015

3.2 Network costs

The network costs comprise the network charges, which are set out in section 3.2.1, and the metering costs, which are set out in section 3.2.2.

3.2.1 Network charges

The network tariffs that have been used to calculate the network component of the retail electricity bill are set out in Table 3.5.

TABLE 3.5 NETWORK TARIFFS BY DISTRIBUTOR

State	Distributor	Network tariff	
Small business customers			
NSW	Ausgrid	EA050*	Small Business Non ToU
NSW	Endeavour	N90	General Supply non-TOU (BT)
NSW	Essential Energy	BLNN1AU	LV General supply Block Tariff
QLD	Energex	8500	Business Flat
SA	SA Power Networks	LVB2R	Low Voltage Business - 2 Rate (<160 MWh only, controlled load might be used)
VIC	AusNet Services	NEE12	Small Business single rate

State	Distributor	Network tariff	
VIC	CitiPower	C1G	Non-Residential single rate
VIC	Jemena	A200	Small Business
VIC	Powercor	ND1	Non-Residential single rate
VIC	United Energy	LVM1RF	Low voltage medium 1 rate
Residential customers			
NSW	Ausgrid	EA010*	Residential Non ToU
NSW	Endeavour	N70	Domestic (BT)
NSW	Essential Energy	BLNN2AU	LV Residential Continuous Block Tariff
QLD	Energex	8400	Residential Flat
SA	SA Power Networks	LVRS	Low Voltage Residential - Single Rate
VIC	AusNet Services	NEE11	Small Residential single rate
VIC	CitiPower	C1R	Residential Single Rate
VIC	Jemena	A100	General Purpose
VIC	Powercor	D1	Residential Single Rate D1
VIC	United Energy	LVS1R	Low voltage small 1 rate

SOURCE: AER'S APPROVED TARIFFS

The fixed and variable components of the network costs in each electricity distribution area, for residential and small business customers with average consumption for that tariff (where available) or by electricity distribution area, are set out in Table 3.6.

TABLE 3.6 NETWORK COSTS BY DISTRIBUTOR IN 2015-16 (2015 FOR VICTORIA), BASED ON AVERAGE CONSUMPTION FOR THAT TARIFF OR ELECTRICITY DISTRIBUTION AREA

State	Distributor	Residential customers		Small business customers	
		Fixed	Variable	Fixed	Variable
		\$ per annum	\$ per annum	\$ per annum	\$ per annum
NSW	Ausgrid	120	616	431	1,961
NSW	Endeavour	119	620	170	2,510
NSW	Essential Energy	281	574	281	2,994
QLD	Energex	180	722	258	2,127
SA	SA Power Networks	110	531	110	3,212
VIC	AusNet Services	61	503	110	3,212
VIC	CitiPower	54	299	122	1,249
VIC	Jemena	27	390	70	1,266
VIC	Powercor	103	413	94	694
VIC	United Energy	51	358	47	2,585

SOURCE: AER'S APPROVED TARIFFS

The variable component of the network costs cannot be directly compared as the average consumption varies significantly from electricity distribution area to electricity distribution area.

The fixed component of the network costs varies significantly across electricity distributors. While the fixed charge is the same for residential and small business customers in some electricity distribution areas, it is different in other electricity distribution areas.

3.2.2 Metering costs

We have assumed that all small customers have a meter supplied by their electricity distributor and the applicable metering charges are those that are regulated by the AER. The metering costs that are assumed to be incurred by customers in each electricity distribution area are set out in Table 3.7.

TABLE 3.7 METERING COSTS BY DISTRIBUTOR IN 2015-16 (2015 FOR VICTORIA)

State	Distributor	Metering cost	
		Residential customers	Small business customers
		\$ per annum	\$ per annum
NSW	Ausgrid	29.71	40.59
NSW	Endeavour	21.36	14.76
NSW	Essential Energy	31.56	31.56
QLD	Energex	35.29	35.29
SA	SA Power Networks	66.68	66.68
VIC	AusNet Services	205.54	205.54
VIC	CitiPower	115.90	115.90
VIC	Jemena	226.36	226.36
VIC	Powercor	109.40	109.40
VIC	United Energy	154.31	154.31

SOURCE: AER'S APPROVED TARIFFS

The metering costs are higher in Victoria than the other states with the rollout of smart meters.

3.3 Energy costs

The energy costs comprise:

- wholesale energy and renewable energy costs, which are set out in section 3.3.1
- NEM fees, ancillary service charges and costs of meeting prudential requirements, which are set out in section 3.3.2
- network losses incurred during the transmission and distribution of electricity to customers, which are set out in section 3.3.3.

3.3.1 Wholesale energy and renewable energy costs

The wholesale energy costs and renewable energy costs that have been used to determine the energy costs in the benchmarking analysis of retail electricity tariffs are set out in Table 3.8.

TABLE 3.8 WHOLESALE ENERGY COSTS BY DISTRIBUTION AREA

State	Period	Distributor	Wholesale energy	LRET	SRES
			\$ per MWh	\$ per MWh	\$ per MWh
NSW	2015-16	Ausgrid	46.03	4.38	4.34
NSW	2015-16	Endeavour	45.70	4.38	4.34
NSW	2015-16	Essential Energy	42.67	4.38	4.34
Qld	2015-16	Energex	63.73	4.38	4.34
SA	2015-16	SA Power Networks	69.54	4.38	4.34
VIC	2015	AusNet Services	36.73	4.06	4.68
VIC	2015	CitiPower	37.09	4.06	4.68
VIC	2015	Jemena	37.85	4.06	4.68
VIC	2015	Powercor	35.91	4.06	4.68
VIC	2015	United Energy	38.27	4.06	4.68

SOURCE: ACIL ALLEN

3.3.2 Other energy costs

The other energy costs that have been included in the total energy costs are set out in Table 3.9. The other energy costs are assumed to be the same in each electricity distribution area in a particular year. Any differences between electricity distribution areas have been assumed to be immaterial.

TABLE 3.9 OTHER ENERGY COSTS

	Other energy cost, 2015-16	Other energy cost, 2015
	\$ per MWh	\$ per MWh
NEM fees	0.47	0.47
Ancillary services	0.36	0.42
Prudential costs	1.03	0.87
Total other energy costs	1.86	1.76

SOURCE: ACIL ALLEN

The other energy costs for 2015-16 were applied to the benchmarking analysis for NSW, Queensland and South Australia, while the other energy costs for 2015 were applied to the benchmarking analysis for Victoria.

3.3.3 Network losses

The transmission loss factor for each electricity distributor is based on an assessment by ACIL Allen of the transmission loss factors that apply in each electricity distribution area. The loss factors and network losses that have been assumed in the benchmarking analysis are shown in Table 3.10.

TABLE 3.10 LOSS FACTORS AND NETWORK LOSSES BY DISTRIBUTOR

State	Period	Distributor	Transmission loss factor (MLF)	Distribution loss factor (DLF)	Total loss factor	Network losses
						\$ per MWh
NSW	2015-16	Ausgrid	1.005	1.064	1.069	4.01
NSW	2015-16	Endeavour	0.991	1.068	1.059	3.40
NSW	2015-16	Essential Energy	1.028	1.087	1.117	6.41
Qld	2015-16	Energex	1.006	1.059	1.065	4.82

State	Period	Distributor	Transmission loss factor (MLF)	Distribution loss factor (DLF)	Total loss factor	Network losses
SA	2015-16	SA Power Networks	1.005	1.079	1.086	6.99
VIC	2015	AusNet Services	1.013	1.071	1.086	4.34
VIC	2015	CitiPower	1.001	1.042	1.043	2.17
VIC	2015	Jemena	1.002	1.050	1.051	2.66
VIC	2015	Powercor	1.032	1.070	1.105	5.21
VIC	2015	United Energy	0.997	1.052	1.049	2.55

SOURCE: ACIL ALLEN ANALYSIS OF "REGIONAL BOUNDARIES AND MARGINAL LOSS FACTORS FOR THE 2015-16 FINANCIAL YEAR", AEMO, JUNE 2015 AND "DISTRIBUTION LOSS FACTORS FOR THE 2015/16 FINANCIAL YEAR", AEMO, DECEMBER 2015

3.4 Retailer costs

This section discusses the retailer costs that vary by jurisdiction and therefore need to be specifically taken into consideration in the benchmarking analysis to ensure that we are comparing the retail bills on a like for like basis.

3.4.1 Costs incurred in other jurisdictions that are not incurred in Queensland

As discussed in section 2.3.4, the costs incurred in other jurisdictions that are not incurred in Queensland relate to state-based energy efficiency schemes, metering costs and the regulatory regime.

State-based energy efficiency schemes

The state based energy efficiency schemes that are in place in jurisdictions other than Queensland are the:

- New South Wales Energy Savings Scheme
- South Australian Retailer Energy Savings Scheme
- Victorian Energy Efficiency Target.

NSW Energy Savings Scheme

We obtained market data for ESCs from Green Energy Markets on forward contract for delivery in 2015 and 2016 for the 12 month period up to May 2015 to inform an estimated price for certificates. Based on the price and volumes traded in the forward market for these certificates, we estimate a certificate cost of \$16.10 per certificate in 2015 and \$19.10 per certificate in 2016.

The administrative costs associated with the ESS have been estimated from a series of interviews undertaken with a subset of energy retailers on behalf of the Commonwealth Department of Climate Change and Energy Efficiency. The report estimated that the compliance cost was \$0.76 per certificate for the incumbent retailer and \$0.77 per certificate for other retailers (in 2012 dollars).⁵⁰ Indexing the retailer cost to June 2015 dollars, we estimate administrative costs across retailers of \$0.80 per certificate.

Under the ESS scheme retailers have to surrender certificates equivalent to 5 per cent of electricity sales in NSW in 2015 and 2016. Based on this requirement, the certificate cost and administrative cost estimate, we estimate the total compliance cost under the ESS scheme to be \$1.29 per MWh in 2015-16.

⁵⁰ NERA Economic Consultants and Oakley Greenwood, *Analysis of Compliance Costs for a National Energy Savings Initiative, Final Report for the Department of Climate Change and Energy Efficiency*, December 2012, page 21

As part of the Information Request, we sought information from retailers on the costs associated with the ESS to further inform our estimate. We received two estimates – one of \$0.01 per MWh and the other of \$26.54 per MWh.

In its 2015 report on residential retail electricity prices, the AEMC estimated the cost of the ESS as \$1.30 per MWh in 2015-16.⁵¹

Given this wide range of estimates, we have used our own estimate of \$1.29 per MWh for the cost associated with the ESS in our benchmarking analysis.

South Australian Retailer Energy Efficiency Scheme

In 2010, ESCOSA included an allowance of \$12.55 per customer (in 2010 dollars) for the costs associated with REES in the regulated retail electricity price.⁵² For the purposes of our analysis, we have indexed this allowance based on:

- CPI from September 2010 to March 2015
- the change in the number of audits required from 2011 to 2015
- the change in the number of energy efficiency activities required from 2011 to 2015
- the increase in the number of electricity customers in South Australia from 30 June 2010 to 30 June 2014 (which reduces the amount each customer contributes toward the cost of REES).

The impact of each of these factors on the cost of REES is set out in Table 3.11.

TABLE 3.11 ESTIMATE OF COST ASSOCIATED WITH REES

Factor	2011	2015	Cost of REES \$ per customer
2011 determination			\$12.55
Index by CPI	96.5 ^a	106.8 ^b	\$13.89
Index by number of energy efficiency audits	5,000	5,667	
Index by energy efficiency target (GJ)	1,700,000	1,200,000	\$11.11
Index by customer numbers	807,533	843,121	\$10.64

^a September 2010
^b March 2015
 SOURCE: ESCOSA; ABS, ALL GROUPS CPI, AUSTRALIA

We had previously proposed to index the cost by the weighted average increase in the certificate penalty price from 2011 to 2015 under the NSW and Victorian schemes (to take into consideration the maturity of the scheme and the likely increase in cost as lower cost activities are saturated). The NSW and Victorian schemes have undergone numerous design changes since 2011. For this reason, we have chosen not to index the cost of the REES with changes in certificate prices under the ESS and VEET schemes.

The cost of REES is estimated to be \$2.42 per MWh when converted from a per customer cost of \$10.64 to a per consumption cost, based on the average residential consumption in South Australia.

Only one retailer provided an estimate of the costs associated with the REES scheme. It estimated a cost of \$34.00 per MWh. As with the estimate for the NSW scheme, this is significantly higher than our estimate. If it is assumed that the relativity between the retailer's estimates of the costs for the NSW and South Australian schemes is correct, this implies an estimate of \$1.65 per MWh.

In its 2015 report on residential retail electricity prices, the AEMC estimated the cost of the REES as \$2.10 per MWh in 2015-16.⁵³

We have used our own estimate of \$2.42 per MWh for the cost associated with REES in our benchmarking analysis.

⁵¹ Australian Energy Market Commission, *2015 Residential Electricity Price Trends, Final Report*, 4 December 2015, page 54

⁵² Essential Services Commission of South Australia, *2010 Review of Retail Electricity Standing Contract Price Path, Final Inquiry Report & Final Price Determination*, December 2010, page A-89

⁵³ Australian Energy Market Commission, *2015 Residential Electricity Price Trends, Final Report*, 4 December 2015, page 67

Victorian Energy Efficiency Target

We obtained market data for VEECs from Green Energy Markets on forward contract prices and volumes for the 12 month period up to November 2014. Based on this data we estimated a price of \$16.37 per VEEC for certificates delivered in 2015.

As discussed above for the NSW scheme, we have estimated that the administrative costs associated with the VEET scheme are \$0.80 per certificate.

The total retailer costs associated with the VEET scheme, based on the "Greenhouse Gas Reduction Rate Electricity"⁵⁴ for 2015, the certificate cost, and the compliance cost per certificate are estimated to be \$2.64 per MWh.

As part of the Information Request, we sought information from retailers on the costs associated with the VEET to further inform our estimate. As part of this process we received only one estimate of the cost of complying with the VEET of \$45.44 per MWh. As with the estimate for the NSW scheme, this is significantly higher than our estimate. If it is assumed that the relativity between the retailer's estimates of the costs for the NSW and Victorian schemes is correct, this implies an estimate of \$2.21 per MWh.

In its 2015 report on residential retail electricity prices, the AEMC estimated the cost of the VEET scheme as \$2.10 per MWh in 2014-15 and 2015-16.⁵⁵

We have used our own estimate of \$2.64 per MWh for the cost associated with the VEET scheme in our benchmarking analysis.

Metering costs

As part of the Information Request, we requested information from the retailers on the estimated additional cost incurred in supporting smart meters in Victoria. No information was provided by the retailers that could inform our analysis.

As no information is available publicly, we have not quantified the additional costs associated with smart meters as an input to the benchmarking analysis. Rather, we have considered whether there is an impact as part of our analysis of the results from the benchmarking.

Regulatory regime

We did not seek information from the retailers on the costs in each jurisdiction associated with the regulatory regime, and whether these were different in those jurisdictions in which NECF has been implemented (NSW, Queensland and South Australia) to Victoria, in which NECF has not been implemented.

As with the costs associated with smart meters, we have considered whether there is an impact on Victorian retail electricity bills as part of our analysis of the results from the benchmarking.

3.4.2 Costs incurred in Queensland that may not be incurred in other jurisdictions

The QCA levies regulatory fees on Queensland electricity retailers. QCA's regulatory fees in 2015-16 were \$0.22 per customer per year for customers consuming less than 100 MWh per annum.

With the introduction of NECF, neither IPART nor ESCOSA levy fees on electricity retailers in NSW and South Australia, respectively.

The Essential Services Commission levies fees on Victorian electricity retailers. The total fees levied on Victorian energy retailers (electricity and gas) were \$1,986,348 in 2014-15, \$1,742,680 in 2013-14 and \$1,881,698 in 2012-13. The licence fees for 2015-16 have not been published. On a per customer basis, the licence fees equate to around \$0.45 per customer per year.

Given the uncertainty as to the actual licence fees levied on Victorian electricity retailers for 2015, and noting that they are not a material cost component, we have considered whether there is an impact on Victorian retail electricity bills as part of our analysis of the results from the benchmarking.

⁵⁴ 0.13637 VEECs per MWh

⁵⁵ Australian Energy Market Commission, 2015 Residential Electricity Price Trends, Final Report, 4 December 2015, page 62

4

BENCHMARKING ANALYSIS

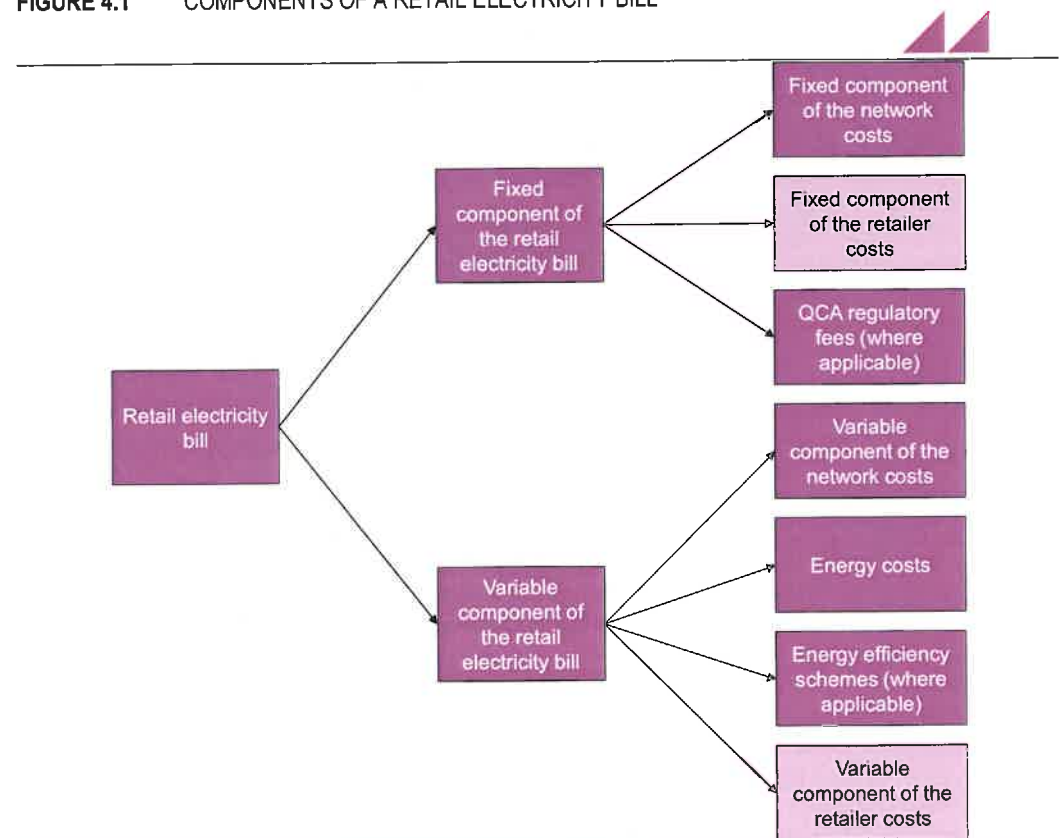
The retailer costs included in the retail electricity bills in the benchmarking dataset are analysed in this chapter.

We first outline how the fixed and variable components of the retailer costs can be calculated for each retail electricity bill considered, in section 4.1. We discuss the fixed and variable components of the retailer costs that are calculated for each residential retail electricity bill in the dataset in section 4.3, for each small business retail electricity bill in section 4.4, and across all small customer retail electricity bills in section 4.5.

4.1 Calculating the fixed and variable components of the retailer costs

The various components of a retail electricity bill are illustrated in Figure 4.1.

FIGURE 4.1 COMPONENTS OF A RETAIL ELECTRICITY BILL



As illustrated in Figure 4.1, a retail electricity bill comprises two components:

- a fixed component, which is based on a fixed or standing (or cents per day) charge
- a variable component, which is based on a consumption (or cents per kWh) charge and the electricity consumed.

The retail electricity bills for each retailer in each electricity distribution area were calculated based on the retail tariff, net of discounts, and the average consumption for that customer segment in that electricity distribution area, as per formula (1).

$$\begin{aligned} \text{Retail bill} = & \text{Fixed charge per year net of discounts} \\ & + \text{Variable charge net of discounts} \\ & \times \text{annual consumption} \end{aligned} \quad (1)$$

The analysis included multiple tariffs for some retailers in some electricity distribution areas. After the retail bills, net of discounts, were calculated, all but the lowest bill for that retailer in that electricity distribution area were removed from the analysis.

The network costs (N) similarly have a fixed and a variable component and were calculated for each retailer in each electricity distribution area as per formula (2).

$$\begin{aligned} N = & \text{Fixed network charge per year} + \text{Metering cost} \\ & + \text{Variable network charge} \times \text{annual consumption} \end{aligned} \quad (2)$$

As illustrated in Figure 4.1, the fixed component of the retail bill (R_f) comprises:

- the fixed component of the network costs, including metering costs (N_f)
- the fixed component of the retailer costs (R_r), which, in the case of Queensland, includes QCA regulatory fees.

The fixed component of the retailer costs was calculated for each retail tariff by deducting the fixed component of the network costs and the QCA regulatory fees (in the case of Queensland retail bills) from the fixed component of the retail bill, as per formula (3).

$$R_f = \text{Fixed component of the retail bill} - N_f - \text{QCA regulatory fees} \quad (3)$$

As illustrated in Figure 4.1, the variable component of the retail bill (R_v) comprises:

- the variable component of the network costs (N_v)
- the total energy costs (E)
- the variable component of the retailer costs (R_r), which, in the case of NSW, South Australia and Victoria, includes the costs associated with state-based energy efficiency schemes.

The variable component of the retailer costs was calculated for each retail tariff by deducting the variable component of the network costs, the total energy costs and the costs associated with state-based energy efficiency schemes (in the case of retail bills for NSW, South Australia and Victoria) from the variable component of the retail bill, as per formula (4).

$$\begin{aligned} R_v = & \text{Variable component of the retail bill} - N_v - E \\ & - \text{costs associated with energy efficiency schemes} \end{aligned} \quad (4)$$

4.2 Calculating the ROC and retail margin

In the previous QCA determination, the ROC allowance was applied to the fixed component of the retail tariff⁵⁶ and the retail margin was expressed as a percentage of the total costs, inclusive of the margin.⁵⁷

⁵⁶ Queensland Competition Authority, *Regulated retail electricity prices for 2015-16, Final determination*, June 2015, page 30

⁵⁷ *Ibid.*, page 32

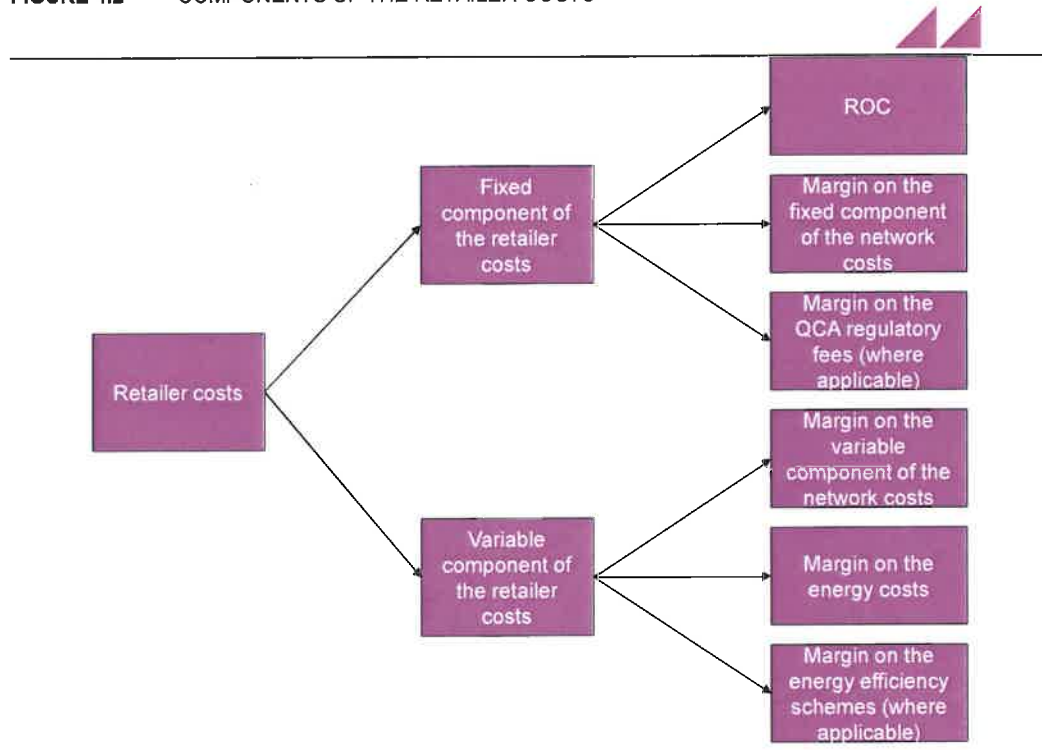
As illustrated in Figure 4.2, the fixed component of the retailer costs comprises:

- the ROC
- a gross margin on the fixed component of the network costs (N_f) and the ROC.

The variable component of the retailer costs comprises a gross margin on:

- the variable component of the network costs (N_v)
- the total energy costs (E)
- the costs associated with the state-based energy efficiency schemes (where relevant).

FIGURE 4.2 COMPONENTS OF THE RETAILER COSTS



While some submissions to the QCA's Interim Consultation Paper appear to be of the view that the retail margin is the retailer's profit margin, this is not necessarily the case. The retail margin includes those retailer costs that the retailer recovers from its customers on a per consumption basis rather than a per customer basis. Accordingly, the retail margin includes retailer costs as well as the retailer's net profit margin.

As an example, the retailer could allocate the operating costs associated with its IT systems based on the number of customers or on consumption. If the costs are allocated based on the number of customers, the costs associated with the IT systems will be recovered from customers through the ROC. If the costs are allocated based on consumption, the costs associated with the IT systems will be recovered from customers through the retail margin.

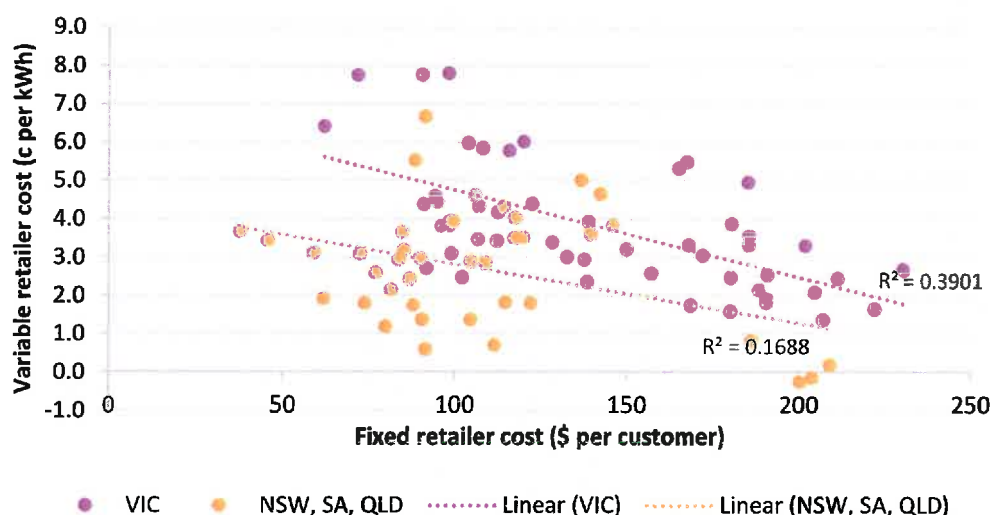
As the "retail margin" includes the retailer costs that are recovered on a per consumption basis, this report refers to the fixed and variable components of the retailer costs, rather than to the ROC and retail margin.

4.3 Benchmarking retailer costs – residential tariffs

The fixed and variable retailer costs incorporated within each residential retail electricity tariff analysed for 2015-16 (in the case of NSW, Queensland and South Australia) and 2015 (in the case of Victoria) are plotted in Figure 4.3. The fixed retailer costs for Victoria have been escalated by six months CPI so that they are presented on the same basis. The variable retailer costs have not been escalated –

as discussed in section 4.3.1, we have made an adjustment to the variable retailer costs in Victoria which accounts for the difference in a range of factors, including timing.

FIGURE 4.3 FIXED AND VARIABLE RETAILER COSTS FOR RESIDENTIAL RETAIL TARIFFS, 2015-16



Note: The fixed retailer costs for Victoria have been escalated by six months CPI so that the fixed operating costs are presented on the same basis. The fixed retailer costs for Queensland retailers exclude the QCA regulatory fees.

SOURCE: ACIL ALLEN

Figure 4.3 indicates that there is a wide spread of retailer costs, and there is a relationship between the fixed and variable component of the retailer costs; as the fixed component increases, the variable component decreases.

This is unsurprising. The allocation of costs by the retailers between the fixed component and variable component is dependent on their cost allocation methodology. While there are some costs that are clearly driven by customer numbers, such as the costs associated with call centres, billing and revenue collection (excluding bad debts) and customer acquisition and retention costs, the retailer has discretion as to whether the other costs, such as the costs associated with IT systems, regulatory compliance and depreciation are allocated on the basis of customer numbers or consumption.

The decision on the cost allocation methodology will vary depending on the retailer's risk appetite. If costs are allocated based on customer numbers, the retailer has a high degree of certainty that the costs will be recovered from its customer base, regardless of the energy consumed. If costs are allocated based on energy consumption, the ability to recover the costs will vary depending on the energy consumed by its customers.

The retailers appear to have a preference to recover more costs through a per customer charge rather than through a per consumption basis in a regulated environment. This is evident through the regulatory process. The retailers have advocated for a higher retail operating cost than is evident in market offers, as demonstrated by the benchmarking analysis, through their submissions to the QCA's Interim Consultation Paper, and the information provided in their Information Requests.

There are equity considerations associated with allocating a high proportion of the retailer costs on the basis of the number of customers. If a high proportion of the retailer costs is allocated on the basis of the number of customers, then the fixed charge will be a relatively high proportion of the retail electricity bill for customers with a low level of consumption and a relatively lower proportion of the retail electricity bill for customers with a high level of consumption.

4.3.1 Adjusting for the higher costs incurred in Victoria

As discussed in section 3.4.1, the retailers incur higher costs in Victoria with the rollout of smart meters, the higher rate of churn and licence fees imposed by the Essential Services Commission.

They also may have higher (or lower) costs operating under a state-based regulatory regime rather than NECF.

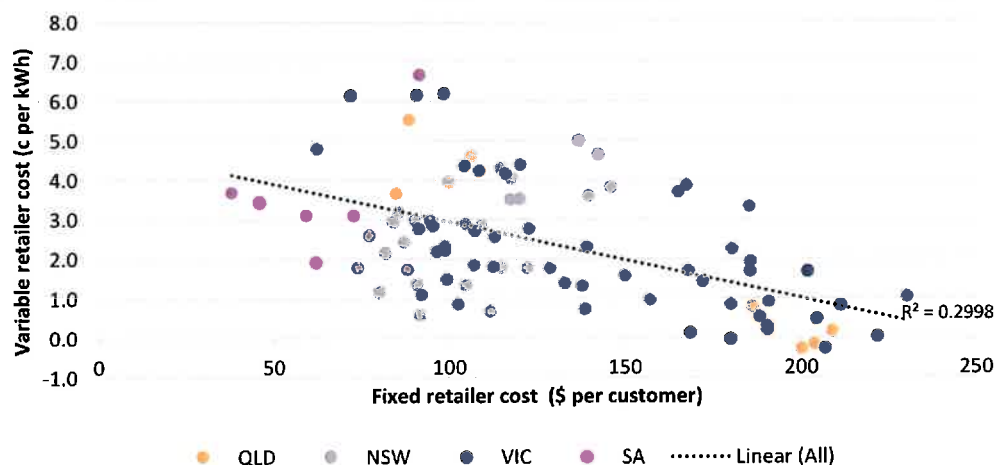
We were unable to quantify these costs as an input to the benchmarking, but Figure 4.3 illustrates that, for a given fixed retailer cost, the variable retailer cost is systemically higher in Victoria than the other jurisdictions, or conversely, for a given variable retailer cost, the fixed operating cost is higher in Victoria than the other jurisdictions. The difference between the variable retailer cost for Victoria relative to the other states is consistent across the data set, that is, the line of best fit for the Victorian data has a similar slope to the data for the other jurisdictions (-0.02), but has a higher intercept (7.05 compared to 4.38).

Accordingly, we have made an adjustment to the Victorian data to account for the rollout of smart meters, the higher rate of churn, the licence fees imposed by the Essential Services Commission and the different regulatory regime. This adjustment also accounts for the difference in timing.

We have reduced the variable retailer cost by the difference between the lines of best fit at the mean fixed retailer cost for residential tariffs in Victoria (\$143.21). The lines of best fit indicate that, when the fixed retailer costs are \$143.21, the variable retailer costs are 3.77 cents per kWh in Victoria and 2.16 cents per kWh in the other jurisdictions. This equates to a variance of 1.61 cents per kWh or an average adjustment of \$42.99 per Victorian residential electricity bill.

The resultant plot of the fixed and variable retailer costs for residential retail tariffs, by state, is provided in Figure 4.4.

FIGURE 4.4 FIXED AND VARIABLE RETAILER COSTS, RESIDENTIAL RETAIL TARIFFS, BY STATE, 2015-16, ADJUSTED FOR HIGHER COSTS IN VICTORIA



Note: The fixed retailer costs for Victoria have been escalated by six months CPI so that the fixed operating costs are presented on the same basis. The fixed retailer costs for Queensland retailers exclude the QCA regulatory fees.

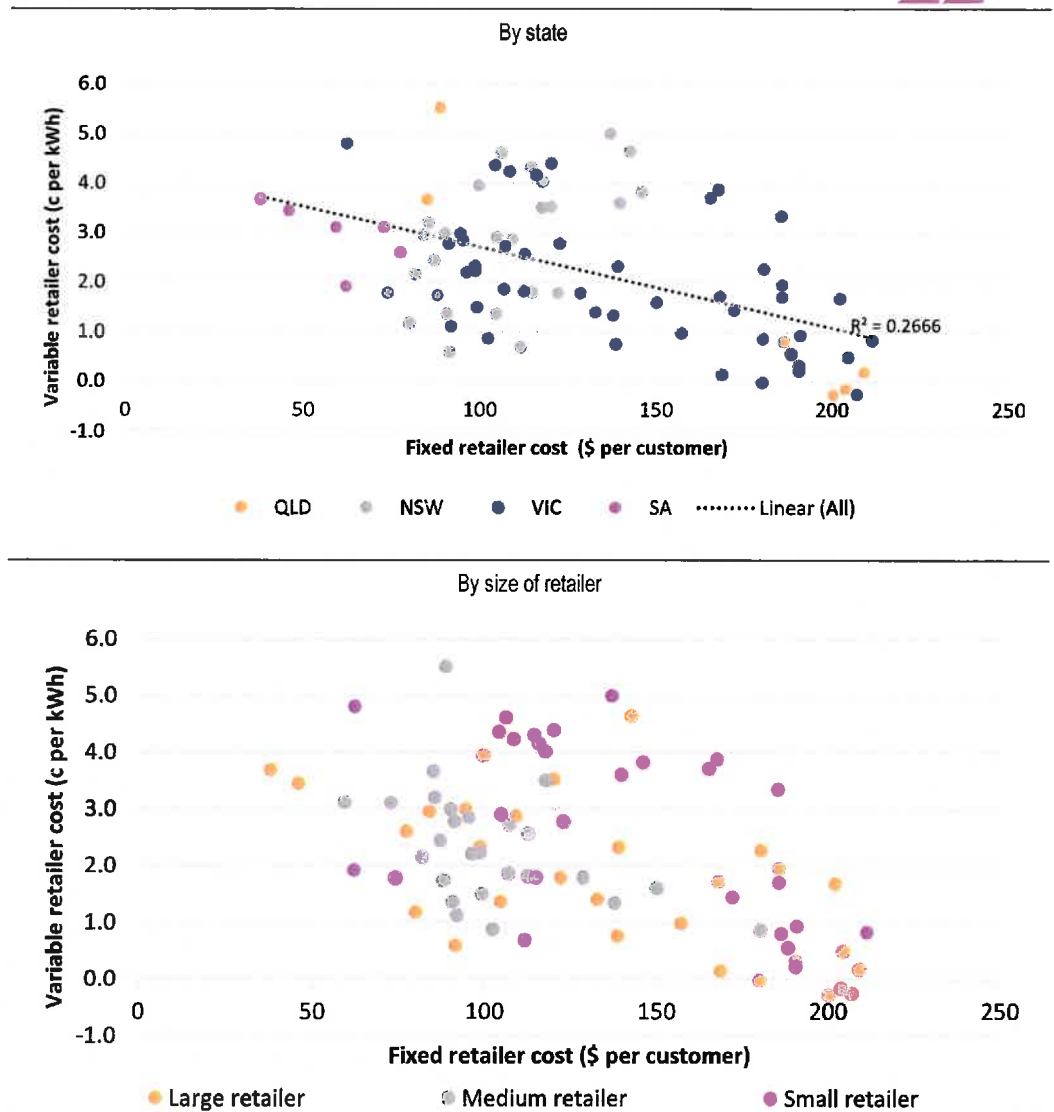
SOURCE: ACIL ALLEN

Figure 4.4 illustrates that, of the six retailers with market offers in Energex’s area, four have a relatively high fixed retailer cost and low variable retailer cost, and two have a much lower fixed retailer cost and correspondingly high variable retailer cost. Again it is unsurprising that most of the offers in Energex’s distribution area have a relatively high fixed retailer cost and low variable retailer cost as this aligns with the QCA’s determination of the ROC (\$169.75 per customer) for 2015-16.

After adjusting the Victorian data points, we removed outlier data points. Outlier data points were those for which the fixed retailer cost or the variable retailer cost was more than two standard deviations from the mean. Six data points were removed from the sample on this basis.

The plots of the fixed and variable retailer costs for residential retail tariffs, by state and by retailer size, with the outlier data points removed, are provided in Figure 4.5.

FIGURE 4.5 FIXED AND VARIABLE RETAILER COSTS, RESIDENTIAL RETAIL TARIFFS, 2015-16, ADJUSTED FOR HIGHER COSTS IN VICTORIA AND OUTLIERS REMOVED



Note: The fixed retailer costs for Victoria have been escalated by six months CPI so that the fixed operating costs are presented on the same basis. The fixed retailer costs for Queensland retailers exclude the QCA regulatory fees.

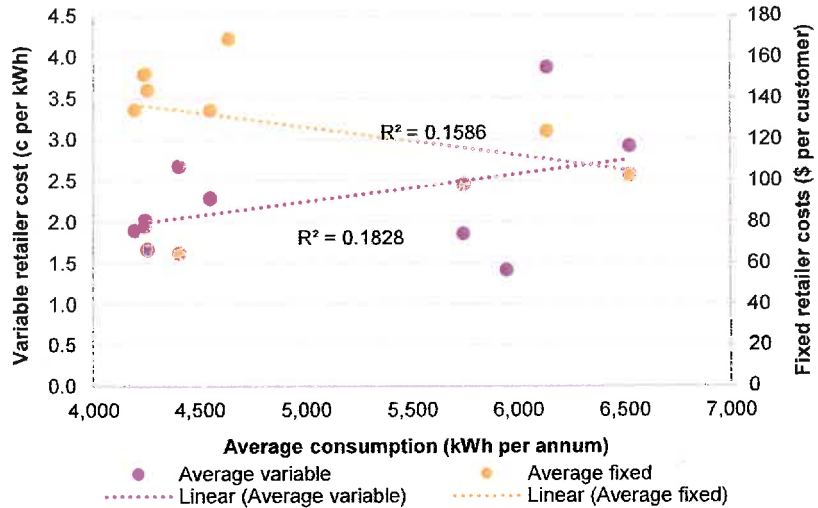
SOURCE: ACIL ALLEN

The second pane in Figure 4.5 illustrates that there is not a statistically significant difference between the retailer costs for different sized retailers.

4.3.2 The impact of average consumption on retailer costs

We considered whether the retailer costs vary as the average consumption increases and therefore whether any adjustment should be made to the data to account for the differences in average consumption. Figure 4.6 provides a plot of the average fixed and variable retailer costs in each electricity distribution area as a function of average consumption.

FIGURE 4.6 FIXED AND VARIABLE RETAILER COSTS AS A FUNCTION OF AVERAGE CONSUMPTION, RESIDENTIAL CUSTOMERS, 2015-16



SOURCE: ACIL ALLEN

Figure 4.6 indicates that the variable retailer costs increase as average consumption increases and the fixed retailer costs decrease as average consumption increases. Figure 4.6 reinforces the need to consider the combination of fixed and variable retailer costs rather than to consider each in isolation.

While Figure 4.6 indicates that the combination of fixed and variable retailer costs varies depending on consumption, it does not indicate that an adjustment needs to be made to account for a different level of consumption.

4.3.3 Relationship between the efficient fixed and variable retailer costs

We have used a line of best fit across the adjusted data, as illustrated in Figure 4.5, to determine a relationship between the fixed retailer costs and variable retailer costs for residential retail bills. The relationship is provided in formula (5).

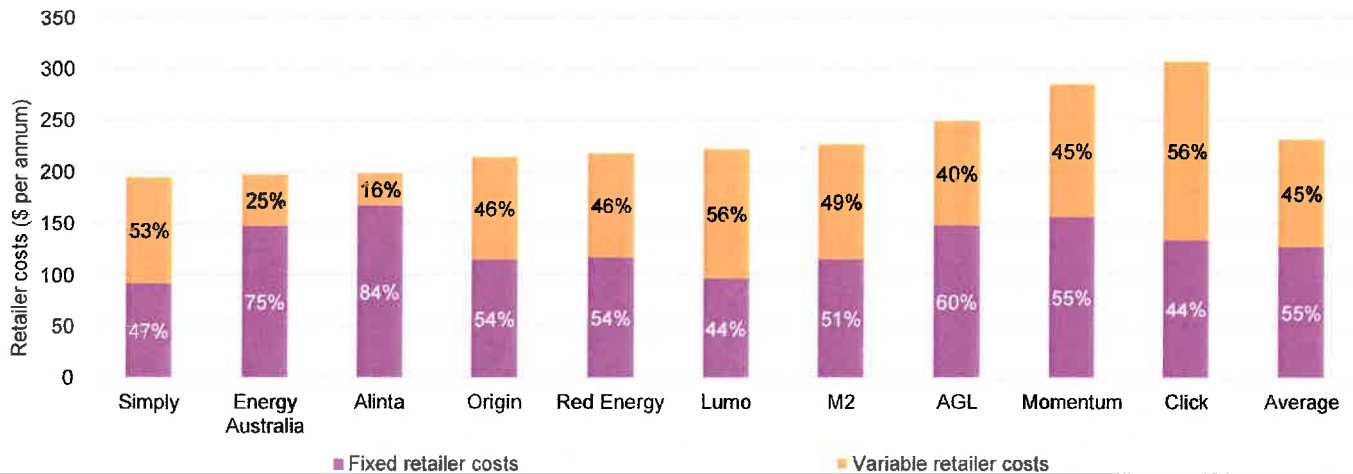
$$\text{Variable retailer costs} = -0.0163 \times \text{Fixed retailer costs} + 4.3382 \quad (5)$$

As an example, this formula indicates that the variable retailer costs are 2.25 cents per kWh when the fixed retailer costs (excluding QCA regulatory fees) are at the mean value for the dataset of residential retail tariffs (\$127.93 per annum).

The average fixed and variable retailer costs, for the most efficient retailer tariffs offered by each of the retailers included in our dataset, across each of the distribution areas, are illustrated in Figure 4.7 and tabulated in Appendix B. To ensure that the retailer costs are comparable, they have all been calculated on the basis of the average residential consumption in Energex’s area (4,640 kWh per annum).

The average retailer costs for a residential customer consuming 4,640 kWh per annum are generally within the range of \$200 and \$230 per annum, with higher average retailer costs for Momentum and Click.

FIGURE 4.7 NORMALISED RETAILER COSTS, BY RETAILER FOR RESIDENTIAL CUSTOMERS, OUTLIERS EXCLUDED, 2015-16



Note: Retailer costs calculated on an annual consumption of 4,640 kWh. The average bar represents the average of the data points, not the average of the retailer averages.

SOURCE: ACIL ALLEN

4.4 Benchmarking retailer costs – small business tariffs

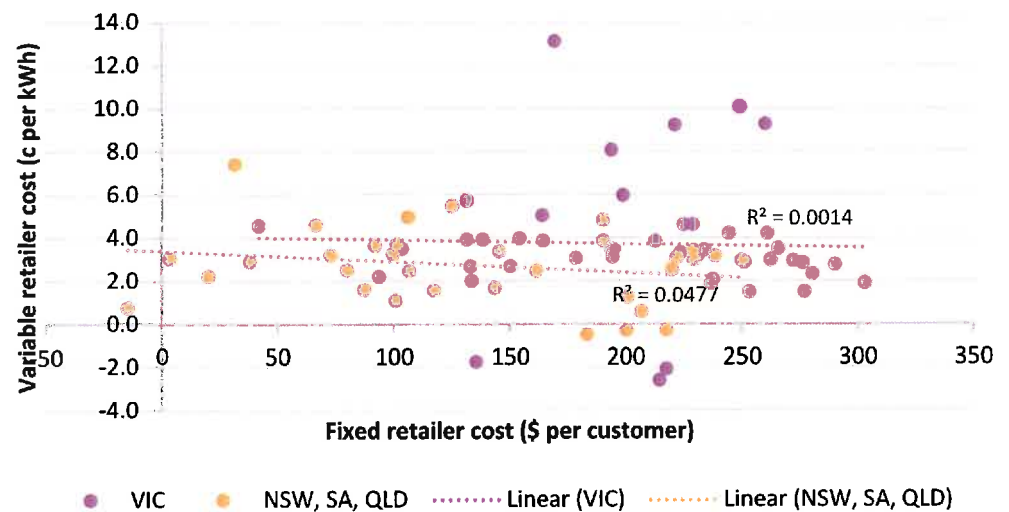
The fixed and variable retailer costs incorporated within each small business retail electricity tariff analysed for 2015-16 (in the case of NSW, Queensland and South Australia) and 2015 (in the case of Victoria) are plotted in Figure 4.8. The fixed retailer costs for Victoria have been escalated by six months CPI so that they are presented on the same basis. The variable retailer costs have not been escalated – as discussed in section 4.4.1, we have made an adjustment to the Victorian variable retailer costs which accounts for the difference in a range of factors, including timing.

As with the retailer costs for residential customers, there is a wide spread of fixed and variable retailer costs for small business customers.

Figure 4.8 illustrates that the relationship between fixed and variable retailer costs that was evident for residential customers is less evident for small business customers. While the variable retailer costs decrease as the fixed retailer costs increase, the decrease is not as significant for small business customers as for residential customers.

This is because the average annual small business customer's retail bill in our dataset was higher (\$3,932) than the average annual residential customer's retail bill (\$1,353). The fixed retailer costs are therefore generally a smaller component of a small business customer's retail bill than a residential customer's bill. A greater proportion of the retailer costs is recovered through the variable component of the retail electricity bills for small business customers than for residential customers.

FIGURE 4.8 FIXED AND VARIABLE RETAILER COSTS FOR SMALL BUSINESS RETAIL TARIFFS, 2015-16



Note: The fixed retailer costs for Victoria have been escalated by six months CPI so that the fixed operating costs are presented on the same basis. The fixed retailer costs for Queensland retailers exclude the QCA regulatory fees.

SOURCE: ACIL ALLEN

4.4.1 Adjusting for the higher costs incurred in Victoria

Figure 4.8 indicates that, as with retailer costs for residential customers, the variable retailer costs are consistently higher in Victoria than in other jurisdictions for a given fixed retailer cost due to the impact of the higher churn rate, smart meters, licence fees and potentially the regulatory regime in Victoria. Notwithstanding, the impact is less for small business customers than for residential customers. This is because these costs are a smaller proportion of a small business customer's bill than a residential customer's bill.

We have made a similar adjustment to the Victorian data for small business customers as we did for residential customers to account for the rollout of smart meters, higher rate of churn, licence fees and potentially the regulatory regime.

We have reduced the variable retailer cost by the difference between the lines of best fit at the mean fixed retailer cost for small business tariffs in Victoria (\$205.28). The lines of best fit indicate that, when the fixed retailer costs are \$205.28, the variable retailer costs are 3.72 cents per kWh in Victoria and 2.37 cents per kWh in the other jurisdictions. This equates to a variance of 1.34 cents per kWh⁵⁸ or an average adjustment of \$41.17 per Victorian residential electricity bill, similar in dollar terms to that for Victorian residential customers.

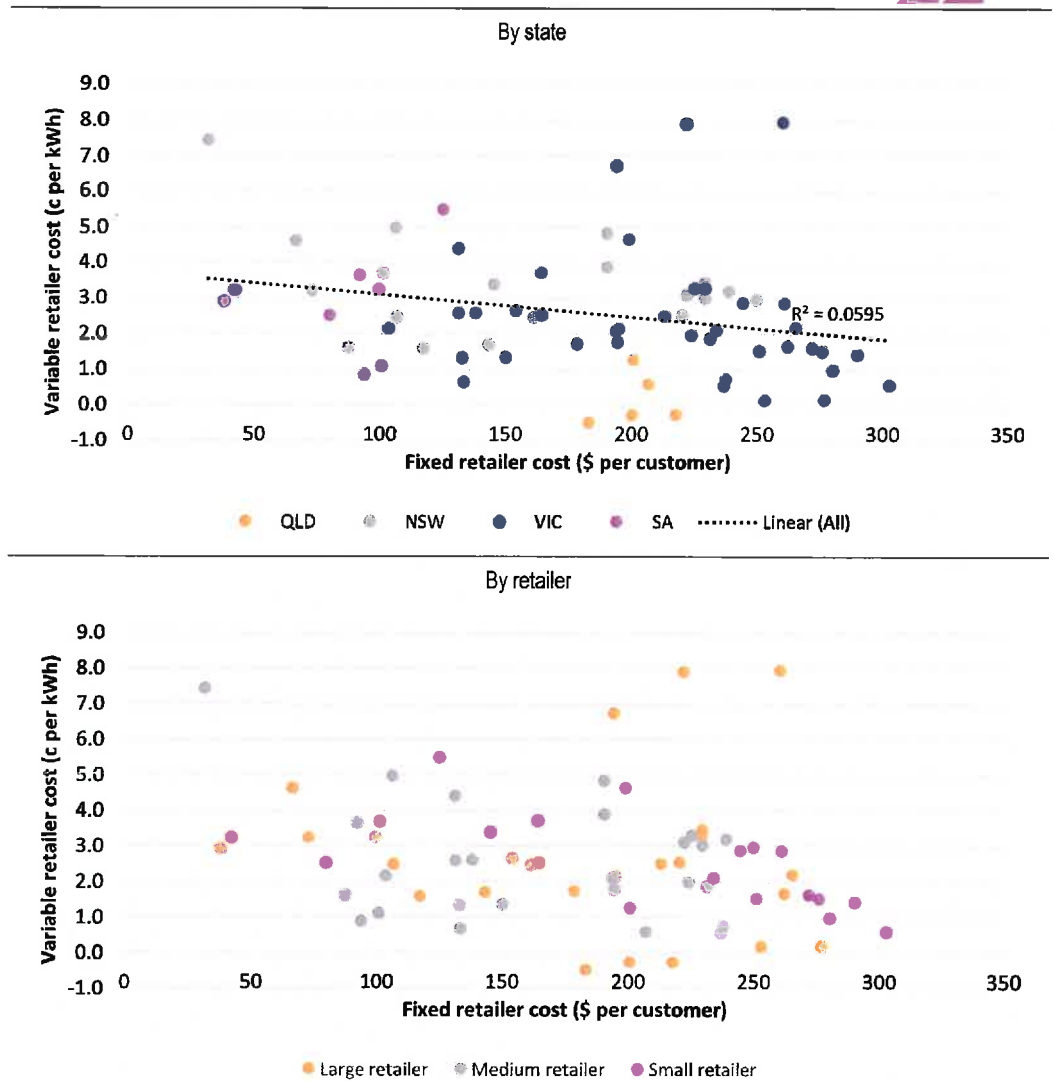
After adjusting the Victorian data points, we removed outlier data points. Outlier data points were those for which the fixed retailer cost or the variable retailer cost was more than two standard deviations from the mean. Eight data points were removed from the sample on this basis.

The plots of the fixed and variable retailer costs for residential retail tariffs, by state and by retailer size, with the outlier data points removed, are provided in Figure 4.9.

The second pane of Figure 4.9 indicates that there is not a statistically significant difference between the retailer costs for different sized retailers.

⁵⁸ 0.01 cents per kWh rounding difference

FIGURE 4.9 FIXED AND VARIABLE RETAILER COSTS, SMALL BUSINESS RETAIL TARIFFS, 2015-16, WITH OUTLIERS REMOVED AND ADJUSTED FOR HIGHER COSTS IN VICTORIA



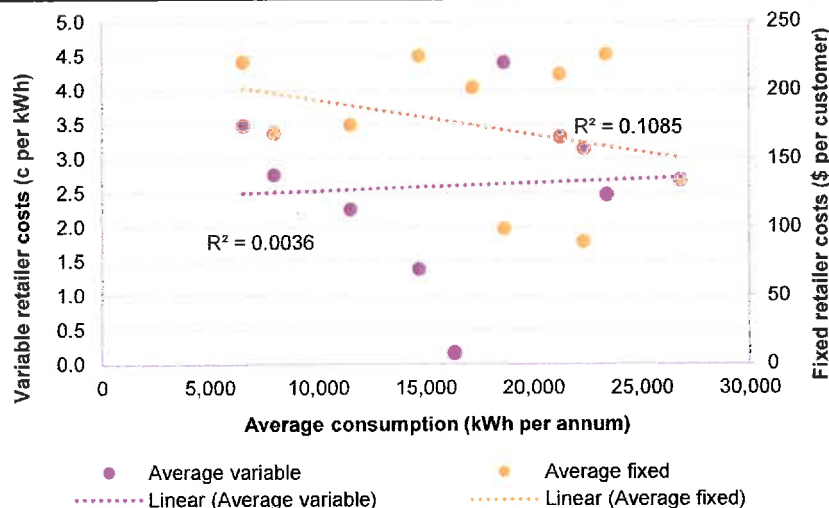
Note: The fixed retailer costs for Victoria have been escalated by six months CPI so that the fixed operating costs are presented on the same basis. The fixed retailer costs for Queensland retailers exclude the QCA regulatory fees.

SOURCE: ACIL ALLEN

4.4.2 The impact of average consumption on retailer costs

We considered whether the retailer costs vary as the average consumption increases and therefore whether any adjustment should be made to the data to account for the differences in average consumption. Figure 4.10 provides a plot of the average fixed and variable retailer costs in each electricity distribution area as a function of average consumption.

FIGURE 4.10 FIXED AND VARIABLE RETAILER COSTS AS A FUNCTION OF AVERAGE CONSUMPTION, SMALL BUSINESS CUSTOMERS, 2015-16



SOURCE: ACIL ALLEN

Figure 4.10 indicates that the variable retailer costs increase as average consumption increases and the fixed retailer costs decrease as average consumption increases, although the relationships are relatively weak. Figure 4.10 reinforces the need to consider the combination of fixed and variable retailer costs rather than to consider each in isolation.

While Figure 4.10 indicates that the combination of fixed and variable retailer costs varies depending on consumption, it does not indicate that an adjustment needs to be made to account for a different level of consumption.

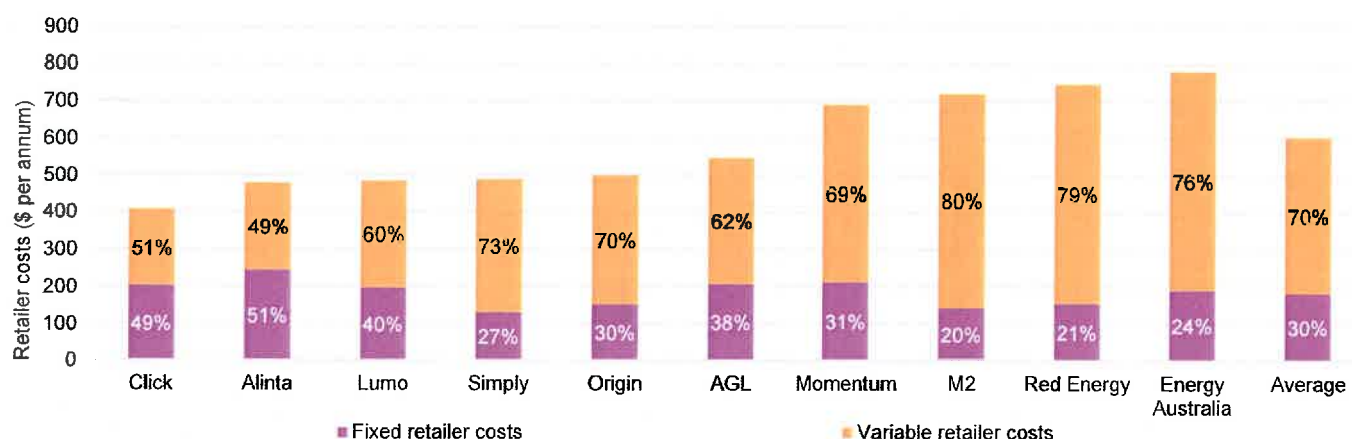
4.4.3 Relationship between the efficient fixed and variable retailer costs

We have used a line of best fit across the adjusted data, as illustrated in Figure 4.9, to determine a relationship between the fixed and variable retailer costs for small business retail bills. The relationship is provided in formula (6).

$$\text{Variable retailer costs} = -0.0063 \times \text{Fixed retailer costs} + 3.7274 \quad (6)$$

As an example, this formula indicates that the variable retailer costs are 2.58 cents per kWh when the fixed retailer costs (excluding QCA regulatory fees) are at the mean value for the dataset of small business retail tariffs (\$181.56 per annum).

The average fixed and variable retailer costs, for the most efficient retailer tariffs offered by each of the retailers included in our dataset, across each of the distribution areas, are illustrated in Figure 4.11 and tabulated in Appendix B. To ensure that the retailer costs are comparable, they have all been calculated on the basis of the average small business consumption in Energex's area (16,370 kWh per annum).

FIGURE 4.11 NORMALISED RETAILER COSTS, BY RETAILER FOR SMALL BUSINESS CUSTOMERS, OUTLIERS EXCLUDED, 2015-16

Note: Retailer costs calculated on an annual consumption of 16,370 kWh

SOURCE: ACIL ALLEN

The benchmarking analysis indicates that the retailer costs for small business customers are higher than the retailer costs for residential customers.

The electricity consumption by small business customers varies significantly – the energy consumed by a small professional services firm, for example, varies significantly from a convenience store or a bakery. The energy consumed by small businesses varies over a larger range than the energy consumed by residential customers. For example, while the average energy consumption for residential customers varied within a range of 4,198 to 6,528 kWh per annum across the ten electricity distribution areas considered in our analysis, the average energy consumption for small business customers varied across the range of 6,571 to 26,799 kWh per annum across the ten electricity distribution areas.

As a result, the approach taken to estimating the wholesale energy costs for small business customers may have underestimated the costs associated with supplying a diverse range of customers. However, by using the same approach to estimating wholesale energy costs for the purposes of this benchmarking analysis and for forecasting the wholesale energy costs for 2016-17, any errors will offset each other – any underestimate in the energy costs will be offset by an overestimate in the retailer costs, assuming that the retailer costs are separately projected for small business customers.

In addition, the costs associated with “larger” small business customers may be higher than for “smaller” small business customers and residential customers. The “larger” small business customers may have three phase metering, which is more expensive than single phase metering that is used for smaller customers, and “larger” small business customers may receive monthly electricity bills rather than quarterly electricity bills.

The retailers may also face higher risks supplying small business customers than residential customers. Small business customers are more likely to come and go than residential customers, potentially leaving electricity bills that are unpaid.

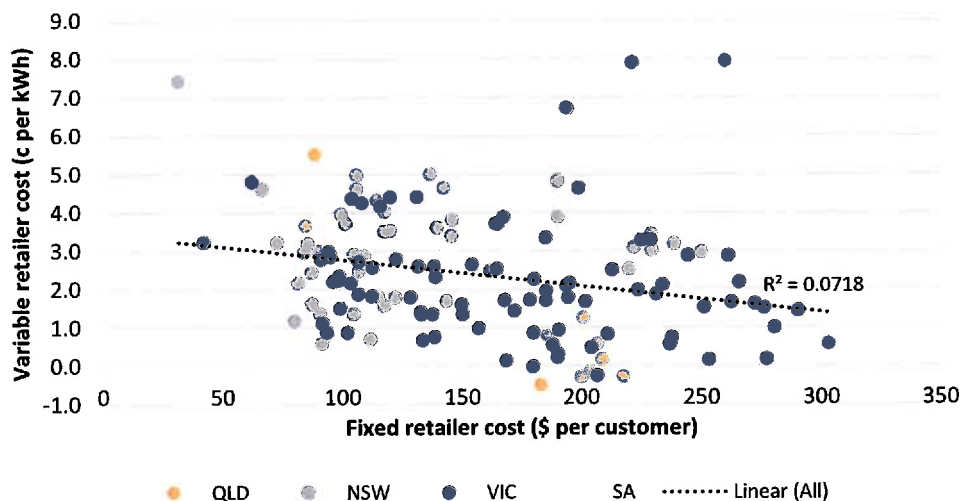
4.5 Benchmarking retailer costs – residential and small business tariffs

As the QCA has previously determined a ROC and retail margin that applied to both residential and small business customers, Figure 4.12 plots the retailer costs for each residential and small business retail electricity tariff analysed for 2015-16 (in the case of NSW, Queensland and South Australia) and 2015 (in the case of Victoria⁵⁹). The data in Figure 4.12 include the adjustments that have been made

⁵⁹ The ROCs for Victoria have been escalated by six months CPI so that the ROCs are presented on the same basis.

to the Victorian variable retailer cost, to allow for the higher costs experienced in Victoria, and the removal of a small number of outlier data points.⁶⁰

FIGURE 4.12 FIXED AND VARIABLE RETAILER COSTS, RESIDENTIAL AND SMALL BUSINESS RETAIL TARIFFS, 2015-16, WITH OUTLIERS REMOVED, AND ADJUSTED FOR HIGHER COSTS IN VICTORIA



Note: The fixed retailer costs for Victoria have been escalated by six months CPI so that the fixed operating costs are presented on the same basis. The fixed retailer costs for Queensland retailers exclude the QCA regulatory fees.

SOURCE: ACIL ALLEN

We have used a line of best fit across the data to determine a relationship between the fixed and variable retailer costs for residential and small business retail bills. The relationship is provided in formula (7).

$$\text{Variable retailer costs} = -0.0068 \times \text{Fixed retailer costs} + 3.4370 \quad (7)$$

As an example, this formula indicates that the variable retailer costs are 2.40 cents per kWh when the fixed retailer costs (excluding QCA regulatory fees) are at the mean value for the dataset of small business retail tariffs (\$152.30 per annum).

If the same retailer costs are applied to both residential and small business customers, the retailer costs will be higher for residential customers and lower for small business customers than if separate retailer costs are applied.

⁶⁰ Outlier data points are those where the fixed retailer cost or variable retailer cost (on a cents per kWh basis) are more than two standard deviations from the mean.



5

BOTTOM-UP ANALYSIS

We received Information Requests from five retailers (EnergyAustralia, EEQ, Origin, QEnergy and Sanctuary) while AGL provided a reconciliation between its published cost to serve and the cost to serve Queensland electricity customers.

This chapter summarises the information that was provided by the retailers. The definition of customer segments is discussed in section 5.1, information on the ROC is provided in section 5.2, information on the retail margin is provided in section 5.3, and information provided to inform the indexation of the ROC and retail margin is provided in section 5.4.

5.1 Customer segments

The Information Request sought information from the retailers to inform the appropriate definition of small customers, large customers and very large customers.

Five retailers provided the definition of a small customer, two retailers provided the definition of a large customer and one retailer provided the definition of a very large customer. The definitions that were provided, and the QCA's current definition, are summarised in Table 5.1.

TABLE 5.1 DEFINITION OF CUSTOMER SEGMENTS

	Proposed definition		
	Small customers	Large customers	Very large customers
	Consumes less than 40 MWh per annum and not part of a multi-site business		
	Consumes less than 4 GWh per annum	Consumes more than 4 GWh per annum	Consumes more than 40 GWh per annum
	All customers		
	Consumes less than 100 MWh per annum	Consumes more than 100 MWh per annum	
	Consumes less than 100 MWh per annum		
Current definition	Consumes less than 100 MWh per annum	Consumes between 100 MWh per annum and 4 GWh per annum	Consumes more than 4 GWh per annum

SOURCE: RETAILERS' INFORMATION REQUESTS

There is no consistency in the definition of customer segments suggested by the retailers' current practices for servicing customers.

5.2 Retail operating costs

The retailers were requested to provide their actual retail operating costs for 2014-15 and their forecast operating costs for 2015-16 and 2016-17 for small, large and very large customers, and publicly available information on their retail operating costs. The type of information provided by each of the retailers is summarised in Table 5.2.

TABLE 5.2 INFORMATION PROVIDED BY THE RETAILERS

Retailer	Actual 2014-15 ROC	Forecast 2015-16 and 2016-17 ROC	Publicly stated ROC
	One ROC provided	No	
	ROCs provided for small, large and very large customers	Yes	
	One ROC provided	No	
	ROCs provided for small and large customers	No	
	One ROC provided	Yes	
AGL	Reconciliation between actual ROC and publicly stated ROC only	No	Yes

SOURCE: RETAILERS' INFORMATION REQUESTS

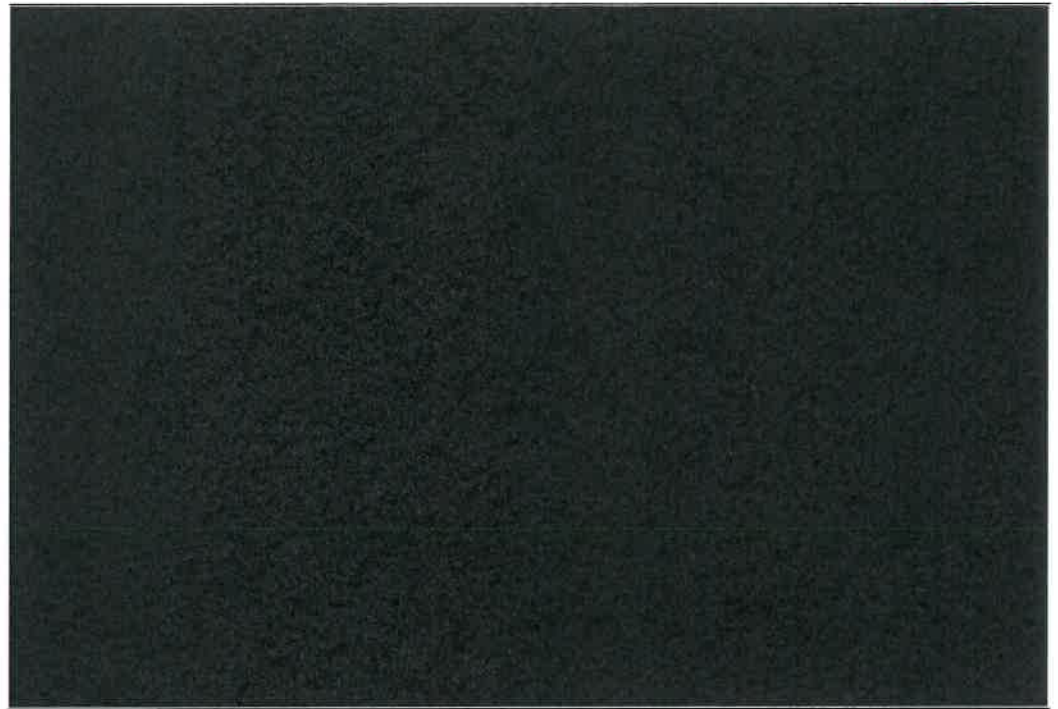
The ROC for small customers is discussed in section 5.2.1 for 2014-15 and in section 5.2.2 for 2015-16 and 2016-17. The ROC for large and very large customers is discussed in section 5.2.3.

5.2.1 ROC for small customers in 2014-15

Figure 5.1 illustrates the actual ROC incurred by each of the retailers in 2014-15 (purple bars).

The actual ROC includes the QCA regulatory fees which were deducted as part of the benchmarking analysis.

FIGURE 5.1 ACTUAL AGGREGATE ROC BY RETAILER FOR SMALL CUSTOMERS, 2014-15



AGL provided a reconciliation between its published ROC (\$112 per customer) and the ROC for Queensland electricity customers (\$ [redacted] per customer). [redacted]

[redacted] This provides an example of the type of costs that are ordinarily considered as variable costs by AGL but are allocated as fixed costs to align with the QCA's previous determination.

The actual ROC generally varies around the QCA's determination. [redacted]

Figure 5.2 provides a breakdown of the actual retailer costs for each retailer for 2014-15 by CARC, other costs that are clearly driven by the number of customers, other costs traditionally categorised as ROC (such as overhead costs), and depreciation and amortisation. The customer driven costs include the costs associated with the call centre, and billing and revenue collection, and exclude costs associated with bad debts, where these are separately identified, and customer acquisition and retention, which are graphed separately. These customer driven costs would be expected to increase as the number of customers increases.

Figure 5.2 includes the depreciation and amortisation costs as EEQ and Origin submitted that these costs should be included in the ROC rather than the retail margin, as has occurred previously.

FIGURE 5.2 BREAKDOWN OF ROC AND DEPRECIATION COSTS BY RETAILER FOR SMALL CUSTOMERS, 2014-15



Note: [REDACTED]

SOURCE: [REDACTED]

The benchmarking analysis reveals that there is a trade-off between the ROC and retail margin and that the balance between the two varies significantly by retailer. In determining the appropriate split between the ROC and retail margin, the customer driven costs, including CARC, effectively provide a floor as to an appropriate level of the ROC component for small customers, and the total costs including depreciation and amortisation provide a ceiling.

Figure 5.2 indicates that, based on the breakdown of costs incurred by the large retailers, the floor on the ROC is around \$80 and the ceiling is around \$175.

Are there any differences between Energex's distribution area and Ergon Energy's distribution area?

We have considered whether there are any cost drivers that would indicate that the efficient costs for providing retail electricity services in Energex's distribution area are different to the efficient costs for providing retail electricity services in Ergon Energy's distribution area.

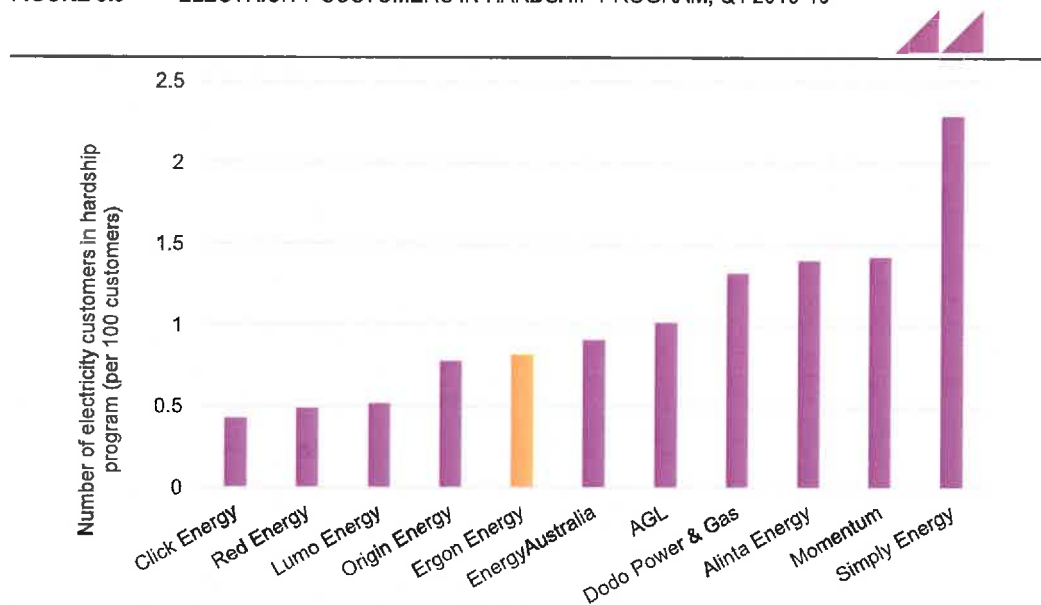
While the costs for providing network services in Ergon Energy's distribution area are higher than the costs for providing network services in Energex's area, there are few retailer costs that would be different in Ergon Energy's distribution area than in Energex's distribution area. The costs associated with servicing a call centre, billing customers and collecting the revenue and for supporting the IT systems would be similar across Ergon Energy's distribution area and Energex's distribution area.

In its submission to the QCA's Interim Consultation Paper, EEQ requested that:

... the QCA take into consideration the high levels of customer hardship in regional Queensland, and the importance of providing support to vulnerable customers when setting the ROC allowance based on a representative retailer.⁶¹

The Australian Energy Regulator publishes quarterly data on the number of residential electricity customers on a hardship program by retailer. The data for the first quarter of 2015-16 for the retailers included in our benchmarking analysis is illustrated in Figure 5.3.

FIGURE 5.3 ELECTRICITY CUSTOMERS IN HARDSHIP PROGRAM, Q1 2015-16



SOURCE: AER'S WEBSITE, [HTTPS://WWW.AER.GOV.AU/RETAIL-MARKETS/RETAIL-STATISTICS/2015-16-Q1-CUSTOMERS-ON-A-HARDSHIP-PROGRAM-BY-RETAILER](https://www.aer.gov.au/retail-markets/retail-statistics/2015-16-q1-customers-on-a-hardship-program-by-retailer)

Figure 5.3 indicates that the proportion of Ergon Energy's electricity customers in a hardship program is not high relative to the other retailers included in the benchmarking analysis and therefore that the costs incurred by Ergon Energy for billing and revenue collection should be similar to those incurred in other distribution areas.

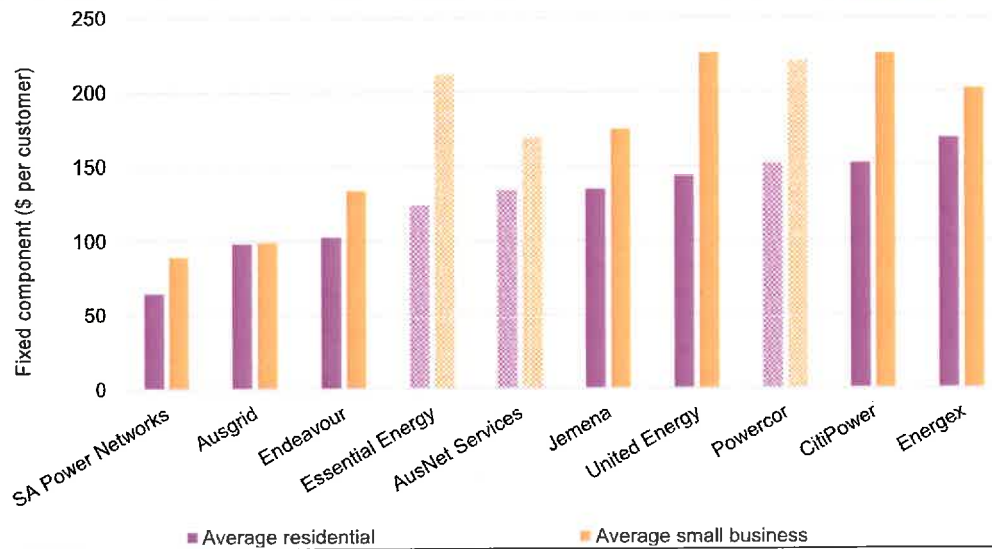
The costs associated with customer acquisition and retention could be higher in Ergon Energy's distribution area than in Energex's distribution area due to the larger geographical area and lower density. Figure 5.2 indicates that CARC varies significantly across the retailers. However, this difference is largely due to the business and marketing strategy of the specific retailer rather than the characteristics of the area served.

There are numerous marketing channels available to a retailer to acquire and retain customers, and the retailer will choose a channel that is most appropriate for a particular area. When the market first opened to competition, retailers were active in door knocking, which would be more expensive in Energex's area than in a more densely populated distribution area. However, in recent years a number of retailers have been fined by the ACCC for their door knocking activities and this particular channel is now used less frequently.

The benchmarking analysis included three electricity distributors predominantly in rural areas (AusNet Services, Essential Energy and Powercor) and seven electricity distributors predominantly in urban areas. Figure 5.4 illustrates the average fixed retailer costs for each electricity distribution area, for residential and small business customers. Figure 5.4 indicates that the fixed retailer costs are not systemically higher in rural areas as compared to urban areas due to a higher CARC.

⁶¹ Ergon Energy Retail, Submission to the QCA's Interim Consultation Paper, 20 January 2016, page 8

FIGURE 5.4 AVERAGE FIXED RETAILER COSTS BY ELECTRICITY DISTRIBUTION AREA, 2015-16

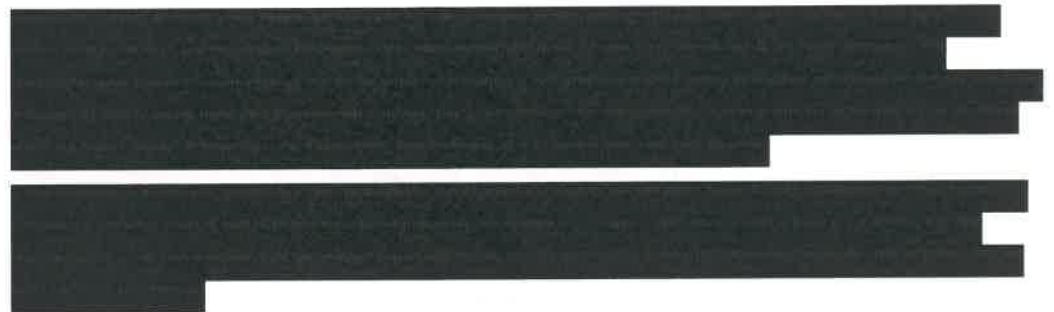


SOURCE: ACIL ALLEN

The information provided by the retailers and the benchmarking data would indicate that the fixed retailer costs are not necessarily different in Ergon Energy’s distribution area than in Energex’s distribution area.

5.2.2 ROC for small customers in 2015-16

Only [redacted] provided their forecast ROC for 2015-16 and 2016-17.



5.2.3 ROC for large and very large customers in 2014-15

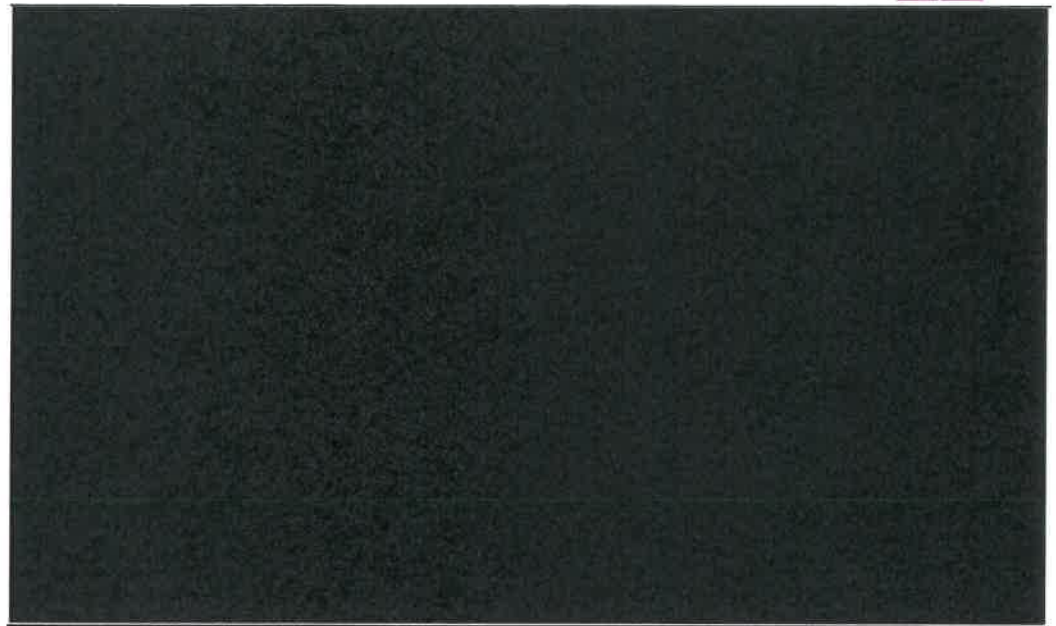
Only [redacted] differentiated the ROC incurred for large and very large customers, although the definition of large and very large customers differed between the two. The other three retailers specified only one ROC. The ROC specified by [redacted] applied to small customers only while the [redacted] applied to all customers.

Of the two retailers that differentiated the ROC for large and very large customers, [redacted] the ROC for a large customer that aligns with the QCA’s definition of a large customer in the previous determination (customer consumes between 100MWh per annum and 4GWh per annum).

[redacted] the ROC for a large customer that aligns with the QCA’s definition of a very large customer in the previous determination (customer consumes more than 4GWh per annum) and provided a ROC for an additional category of customers consuming more than 40GWh per annum.

Figure 5.5 illustrates the variance between the ROC for small customers and the larger customer segments, and compares these to the QCA’s determination for 2014-15.

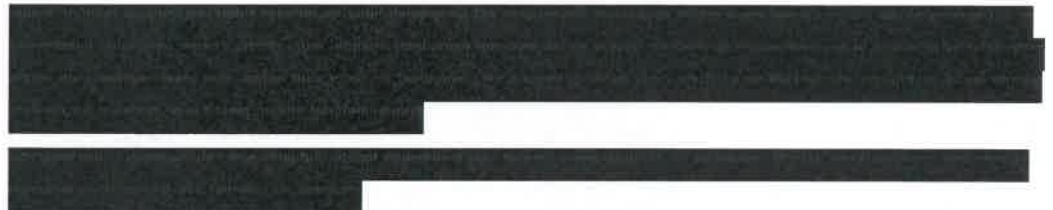
FIGURE 5.5 VARIANCE BETWEEN THE ROC FOR SMALL CUSTOMERS AND THE ROC FOR LARGER CUSTOMERS, 2014-15



SOURCE: ACIL ALLEN BASED ON THE RETAILERS' INFORMATION REQUESTS, QCA'S FINAL DETERMINATION ON REGULATED RETAIL PRICES FOR 2014-15

5.3 Retail margin

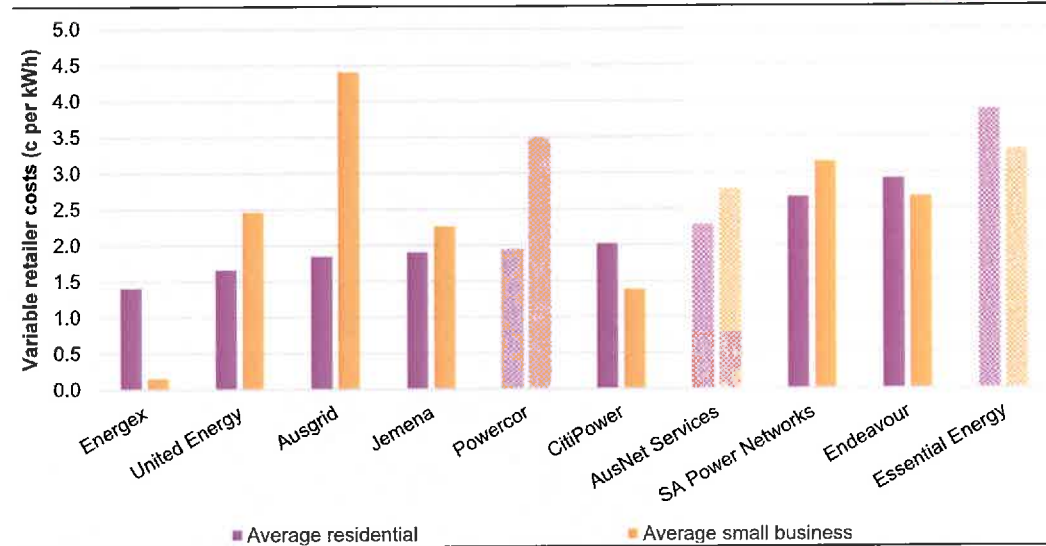
The Information Request sought information from the retailers on the retail margin.



We have considered whether there are any cost drivers that would indicate that the efficient margin required by a retailer for providing retail electricity services in Energex's distribution area is different to the efficient margin required for providing retail electricity services in Ergon Energy's distribution area.

Figure 5.6 illustrates the average variable retailer costs for each electricity distribution area, for residential and small business customers, based on our benchmarking analysis. Figure 5.6 indicates that the variable retailer costs are not systemically higher in rural areas as compared to urban areas.

FIGURE 5.6 AVERAGE VARIABLE RETAILER COSTS BY ELECTRICITY DISTRIBUTION AREA, 2015-16



SOURCE: ACIL ALLEN

The information provided by the retailers and the benchmarking data would indicate that the variable retailer costs are not necessarily different in Ergon Energy's distribution area than in Energex's distribution area.

5.4 Indexing the retailer costs

To inform the indexing of the retailer costs, the Information Request sought information on:

- the proportion of costs that were consumed by labour and materials
- forecast cost reductions as a result of recent or upcoming investments in IT systems, for example.

Only [redacted] provided the split between labour and materials costs. [redacted]

No retailers provided information on forecast cost reductions as a result of recent or upcoming investments. As discussed in section 5.2.2, [redacted]



6

ESTIMATING EFFICIENT RETAILER COSTS

This chapter brings together the benchmarking analysis in chapter 4 and the bottom-up analysis in chapter 5.

The definition of the customer segments is discussed in section 6.1. An efficient retailer cost in 2015-16 is discussed in section 6.2 for small customers and in section 6.3 for large and very large customers.

Indexation of the fixed variable costs is discussed in section 6.4 and indexation of the variable retailer costs is discussed in section 6.5.

6.1 Defining the customer segments

The customer segments proposed by the retailers are compared to the current customer segments in section 5.1.

There is no consistent view expressed by the retailers as to the appropriate customer segments and no compelling evidence that the customer segments should be varied from the customer segments specified in the QCA's previous determination. Regardless of the definition chosen, the higher ROC that has been proposed by the retailers for larger customers is immaterial relative to the size of a larger customer's retail electricity bill.

For the purposes of this report, we have assumed that the following definition of the customer segments, as previously determined by the QCA continue to apply:

- small customer – consumes less than 100 MWh per annum
- large customer – consumes between 100 MWh and 4 GWh per annum
- very large customer – consumes more than 4 GWh per annum.

6.2 An efficient retailer cost for small customers in 2015-16

The benchmarking analysis has revealed that there is a relationship between the efficient fixed retailer costs and the efficient variable retailer costs – as the fixed retailer costs increase, the variable retailer costs decrease.

The QCA therefore has the discretion to choose the combination of fixed and variable retailer costs that best meets its objectives.

While the QCA has historically determined a single retailer cost for all small customers – both residential and small business – the benchmarking analysis has revealed that the efficient retailer cost for small business customers is higher than the efficient retailer cost for residential customers, and the efficient retailer cost for all small customers is higher than the efficient retailer cost for residential customers.

If the efficient retailer cost is determined to be the same for all small customers, and is determined based on the efficient retailer costs as revealed by the benchmarking analysis, all else being equal, the regulated retail electricity bills for residential customers will generally increase and the retail electricity bills for small business customers will generally decrease.

If the efficient retailer cost is determined separately for residential customers and for small business customers, and is determined based on the efficient retailer costs as revealed by the benchmarking analysis, all else being equal, the regulated retail electricity bills for the average residential customer will remain relatively unchanged and will increase for a small business customer.

- Given the discretion available to the QCA in determining an efficient retailer cost, Table 6.1 draws on the benchmarking analysis to illustrate the impact of the various options available on a customer in Energex's distribution area with average consumption, with consumption 20 per cent above the average and 20 per cent below the average. The options are:
- to specify the retailer cost separately for residential and small business customers, or to specify one retailer cost that applies to both
- to assume the same fixed retailer cost as the relevant mean in the benchmarking dataset
- to set the fixed retailer cost at the "floor", which is equal to the retailer costs that are clearly driven by the number of customers (call centre, billing and revenue collection (excluding bad debts) and customer acquisition and retention costs)
- to set the fixed retailer cost at the "ceiling", which includes all retail operating costs including costs associated with depreciation and amortisation.

TABLE 6.1 IMPACT OF RETAILER COST OPTIONS ON RETAIL ELECTRICITY BILLS, 2015-16

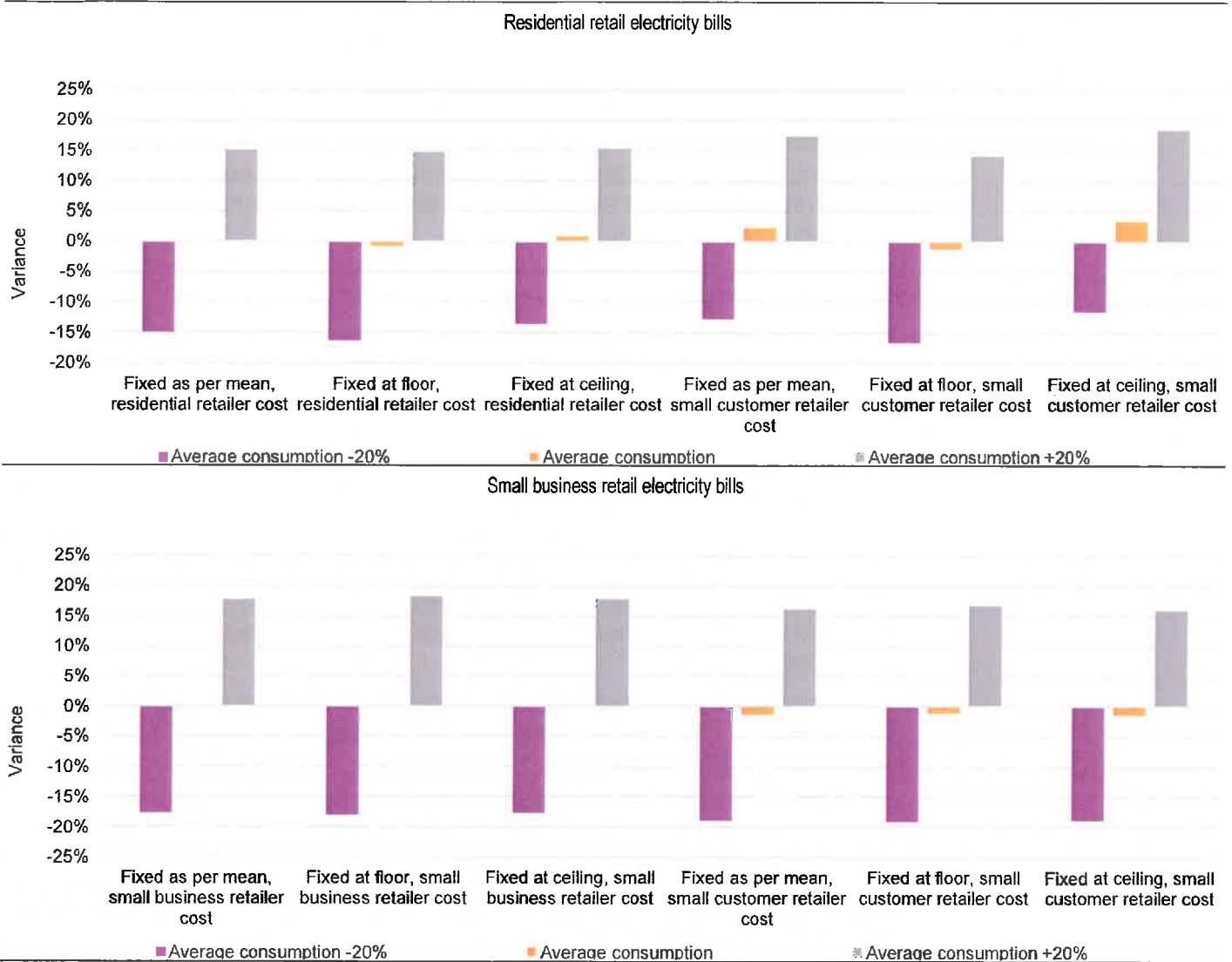
Option	Impact on customer retail bills				
	Fixed retailer cost	Variable retailer cost	Average consumption -20%	Average consumption	Average consumption +20%
	\$ per annum	cents per kWh	\$ per annum	\$ per annum	\$ per annum
Residential customers, residential retailer cost					
Fixed as per residential mean	127.93	2.25	\$ 1,163.59	\$ 1,368.61	\$ 1,573.62
Fixed at floor	80.00	3.03	\$ 1,144.74	\$ 1,357.02	\$ 1,569.31
Fixed at ceiling	175.00	1.48	\$ 1,182.10	\$ 1,379.98	\$ 1,577.86
Residential customers, small customer retailer cost					
Fixed as per small customer mean	152.30	2.40	\$ 1,193.57	\$ 1,399.98	\$ 1,606.40
Fixed at floor	80.00	2.89	\$ 1,139.57	\$ 1,350.56	\$ 1,561.55
Fixed at ceiling	175.00	2.24	\$ 1,210.52	\$ 1,415.50	\$ 1,620.48
Small business customers, small business retailer cost					
Fixed as per small business mean	181.56	2.58	\$ 3,440.48	\$ 4,181.79	\$ 4,923.09
Fixed at floor	80.00	3.22	\$ 3,423.03	\$ 4,185.35	\$ 4,947.68
Fixed at ceiling	175.00	2.62	\$ 3,439.35	\$ 4,182.02	\$ 4,924.68
Small business customers, small customer retailer cost					
Fixed as per small customer mean	152.30	2.40	\$ 3,387.52	\$ 4,122.90	\$ 4,858.27
Fixed at floor	80.00	2.89	\$ 3,379.80	\$ 4,131.32	\$ 4,882.84
Fixed at ceiling	175.00	2.24	\$ 3,389.94	\$ 4,120.25	\$ 4,850.56

Note: Fixed retailer costs and customer bills exclude QCA regulatory fees

SOURCE: ACIL ALLEN

The impact of the different options on small customers' retail electricity bills is illustrated in Figure 6.1, which plots the variance between the retail electricity bill for a customer with average consumption with the current ROC and customer segment specific retail margin, and the retail electricity bill under the different options.

FIGURE 6.1 IMPACT OF RETAILER COST OPTIONS ON TYPICAL RETAIL ELECTRICITY BILLS, 2015-16



SOURCE: ACIL ALLEN

Figure 6.1 indicates that for **residential customers**:

- the retail electricity bill is relatively consistent across each of the options when there is a retailer cost specifically for residential customers, with a slight increase (decrease) for customers with below average consumption when the fixed retailer cost is set at the ceiling (floor) and a slight decrease for customers with above average consumption when the fixed retailer cost is set at the floor
- the retail electricity bill for residential customers will increase if there is a single retailer cost for small customers except when the fixed retailer cost set at the floor.

Figure 6.1 indicates that for **small business customers**:

- the retail electricity bill is relatively consistent across each of the options when there is a retailer cost specifically for small business customers
- the retail electricity bill for small business customers will decrease if there is a single retailer cost for small customers.

6.3 An efficient retailer cost for large and very large customers in 2015-16

As discussed in section 5.2.3, the retailers provided limited information on the ROC for large and very large customers and the information varied significantly by retailer.

The risks associated with the QCA determining a retailer cost for large and very large customers that is above the efficient cost are lower than the risks associated with the QCA determining a retailer cost for small customers that is above the efficient cost, because:

- the market for larger customers is more competitive than for smaller customers – if the retailer cost included in the regulated tariff is too high, customers will have access to competitive market offers which include a lower retailer cost
- the retailer cost as a proportion of the total retail costs is a much lower proportion for large customers than for small customers.

Given the small number of data points, the variability in the data provided, and the risks associated with the QCA determining a retailer cost for large and very large customers that is too high, there is no compelling evidence that the retailer cost for large and very large customers should vary from the QCA's previous determination.

6.4 Indexing the fixed retailer cost

The fixed retailer cost has been calculated based on benchmark data for 2015-16 and will need to be indexed to 2016-17. Additionally, the fixed retailer cost may need to be indexed to future years.

As discussed in section 2.5.2, the fixed retailer cost can be escalated using CPI, a wage index, or a specific cost index, offset by productivity improvements. Information was requested from the retailers to inform these approaches.

In submissions to the QCA's Interim Consultation Paper, retailers proposed a simple indexation approach based on CPI and parties representing customers suggested that productivity improvements should be taken into consideration.

As discussed in section 5.4, only two retailers provided information on the split between labour and materials to inform the use of a wage index for the labour component of the ROC. The splits between labour and materials provided were very different.

Only two retailers provided information on future expected costs

AGL and Origin publish information on their retail operating costs in their annual reports. While the basis for the retail operating costs are not directly comparable, as they account for costs differently, they both provide the movement in costs from one year to the next.

AGL appears to have changed the basis on which it reports its operating costs. In its 2015 annual report, it reported an increase in its retail operating costs from \$98 per customer to \$112 per customer due to labour, bad and doubtful debts, depreciation, and customer acquisition costs.⁶² In its half yearly results for 2016, it reported an increase in its retail operating costs from \$131 per customer to \$132 per customer.⁶³

In its 2015 annual report, Origin reported a decline in its operating costs from \$167 per customer in 2013-14 to \$159 per customer in 2014-15 due to improvements in billing and collections⁶⁴, and in its half yearly results for 2016 has reported a further reduction in its operating cost per customer of \$6⁶⁵.

The information provided by the retailers and the published results from AGL and Origin would appear to indicate that, in the short term, the growth in the costs of wages and materials appear to be offset by productivity improvements.

⁶² AGL Annual Report 2015, page 41

⁶³ AGL, FY16 Interim Results, Half Year ended 31 December 2015, 10 February 2016, Slide 14

⁶⁴ Origin Energy, 2015 Annual Report, pages 19 and 23

⁶⁵ Origin Energy, 2016 Half Year Results Announcement, Half year ended 31 December 2015, 18 February 2016, Slide 24

On this basis, it is recommended that the fixed retailer cost for 2016-17 be set at the same level as the fixed retailer cost benchmarked for 2015-16. In the absence of any other information, further benchmarking could be undertaken to assess the indexation of the fixed retailer cost in future years. If benchmarking is not undertaken, it is proposed that the fixed retailer cost be indexed by CPI in subsequent years.

6.5 Indexing the variable retailer cost

No information was provided by the retailers on the indexing of the retail margin that could be used to inform the indexing of the variable retailer cost.

To the extent that the variable retailer cost includes costs, rather than profit margin, these costs are expected to increase in line with the increase in the fixed retailer costs.

To the extent that the variable retailer cost includes the profit margin, it is expected that the profit margin will change in line with increases in the allowed costs (energy costs, network costs and retailer costs), with changes in the economic conditions, taxation rate, the asset base and the systematic risk associated with providing customer retail services.

The economic conditions, company taxation rate and systematic risk associated with providing customer retail services are relatively stable currently and therefore no change in the profit margin (as a percentage of total costs) is expected in the short term. However, the cost base to which the profit margin is applied will change in line with changes in the energy costs, network costs and retailer costs.

Further benchmarking could be undertaken to assess the indexation of the variable retailer costs in future years. If benchmarking is not undertaken, the variable retailer costs could be indexed in the short term so that the variable retailer costs as a percentage of the allowed costs remains unchanged. That is, the variable retailer costs would vary in line with changes in the energy costs, network costs and fixed retailer costs.

In the longer term, the variable retailer costs would need to be adjusted to take into consideration a change in the prevailing interest rates.



APPENDICES



The residential retail tariffs that were included in our analysis are listed in Table A-1.

TABLE A.1 RESIDENTIAL RETAIL TARIFFS SOURCED FOR THE BENCHMARKING ANALYSIS

State	Distributor	Solar?	Retailer	Residential retail tariff
NSW	AusGrid	n	AGL	Fixed
NSW	AusGrid	n	AGL	Savers
NSW	AusGrid	y	AGL	Savers (Solar)
NSW	AusGrid	n	AGL	Set and forget
NSW	AusGrid	n	Click Energy	Connect
NSW	AusGrid	n	Click Energy	Easy
NSW	AusGrid	n	Click Energy	Elite
NSW	AusGrid	n	Click Energy	Natural
NSW	AusGrid	y	Click Energy	Shine
NSW	AusGrid	y	Click Energy	Shine Saver
NSW	AusGrid	y	Dodo Power & Gas	Market offer
NSW	AusGrid	y	Energy Australia	Basic
NSW	AusGrid	y	Energy Australia	Flexi Saver
NSW	AusGrid	y	Energy Australia	Flexi Saver (max)
NSW	AusGrid	y	Energy Australia	Rate Fix
NSW	AusGrid	y	Momentum Energy	SmilePower
NSW	AusGrid	y	Momentum Energy	SmilePower DD
NSW	AusGrid	y	Origin Energy	Maximiser
NSW	AusGrid	y	Origin Energy	Origin supply
NSW	AusGrid	y	Origin Energy	Rate freeze
NSW	AusGrid	y	Origin Energy	Saver
NSW	AusGrid	y	Red Energy	Easy Saver
NSW	AusGrid	y	Red Energy	Living Energy Saver
NSW	AusGrid	n	Simply Energy	Guaranteed
NSW	Endeavour	n	AGL	Fixed

State	Distributor	Solar?	Retailer	Residential retail tariff
NSW	Endeavour	n	AGL	Savers
NSW	Endeavour	y	AGL	Savers (Solar)
NSW	Endeavour	n	AGL	Set and forget
NSW	Endeavour	n	Click Energy	Connect
NSW	Endeavour	n	Click Energy	Easy
NSW	Endeavour	n	Click Energy	Elite
NSW	Endeavour	n	Click Energy	Natural
NSW	Endeavour	y	Click Energy	Shine
NSW	Endeavour	y	Click Energy	Shine Saver
NSW	Endeavour	y	Dodo Power & Gas	Market offer
NSW	Endeavour	y	EnergyAustralia	Basic
NSW	Endeavour	y	EnergyAustralia	Flexi Saver
NSW	Endeavour	y	EnergyAustralia	Flexi Saver (max)
NSW	Endeavour	y	EnergyAustralia	Rate Fix
NSW	Endeavour	y	Momentum Energy	SmilePower
NSW	Endeavour	y	Momentum Energy	SmilePower DD
NSW	Endeavour	y	Origin Energy	Maximiser
NSW	Endeavour	y	Origin Energy	Origin supply
NSW	Endeavour	y	Origin Energy	Rate freeze
NSW	Endeavour	y	Origin Energy	Saver
NSW	Endeavour	y	Red Energy	Easy Saver
NSW	Endeavour	y	Red Energy	Living Energy Saver
NSW	Endeavour	n	Simply Energy	Guaranteed
NSW	Essential Energy	n	AGL	Fixed
NSW	Essential Energy	n	AGL	Savers
NSW	Essential Energy	y	AGL	Savers (Solar)
NSW	Essential Energy	n	AGL	Set and forget
NSW	Essential Energy	n	Click Energy	Connect
NSW	Essential Energy	n	Click Energy	Easy
NSW	Essential Energy	n	Click Energy	Elite
NSW	Essential Energy	n	Click Energy	Natural
NSW	Essential Energy	y	Click Energy	Shine
NSW	Essential Energy	y	Click Energy	Shine Saver
NSW	Essential Energy	y	Dodo Power & Gas	Market offer
NSW	Essential Energy	y	Energy Australia	Basic
NSW	Essential Energy	y	Energy Australia	Flexi Saver
NSW	Essential Energy	y	Energy Australia	Flexi Saver (max)
NSW	Essential Energy	y	Momentum Energy	SmilePower
NSW	Essential Energy	y	Momentum Energy	SmilePower DD
NSW	Essential Energy	y	Origin Energy	Maximiser

State	Distributor	Solar?	Retailer	Residential retail tariff
NSW	Essential Energy	y	Origin Energy	Origin supply
NSW	Essential Energy	y	Origin Energy	Rate freeze
NSW	Essential Energy	y	Origin Energy	Saver
NSW	Essential Energy	y	Red Energy	Easy Saver
NSW	Essential Energy	y	Red Energy	Living Energy Saver
NSW	Essential Energy	n	Simply Energy	Guaranteed
QLD	Energex	n	AGL	Fixed
QLD	Energex	n	AGL	Savers
QLD	Energex	y	AGL	Savers (Solar)
QLD	Energex	n	AGL	Set and forget
QLD	Energex	n	Click Energy	Connect
QLD	Energex	n	Click Energy	Easy
QLD	Energex	n	Click Energy	Elite
QLD	Energex	n	Click Energy	Natural
QLD	Energex	y	Click Energy	Shine
QLD	Energex	y	Click Energy	Shine Budget
QLD	Energex	y	Click Energy	Shine Reward
QLD	Energex	y	Dodo Power & Gas	Market offer
QLD	Energex	y	EnergyAustralia	Basic
QLD	Energex	y	EnergyAustralia	Flexi Saver
QLD	Energex	n	EnergyAustralia	Flexi Saver (max offer)
QLD	Energex	y	Lumo Energy	Advantage
QLD	Energex	y	Lumo Energy	Basic
QLD	Energex	y	Lumo Energy	Life
QLD	Energex	y	Lumo Energy	Velocity
QLD	Energex	y	Origin Energy	Maximiser
QLD	Energex	y	Origin Energy	Origin supply
QLD	Energex	y	Origin Energy	Saver
QLD	Energex	n	Simply Energy	No term
SA	SA Power	n	AGL	Fixed
SA	SA Power	n	AGL	Savers
SA	SA Power	y	AGL	Savers (solar)
SA	SA Power	n	AGL	Set and forget
SA	SA Power	n	Alinta Energy	Fair Deal
SA	SA Power	n	Alinta Energy	Harvey Norman
SA	SA Power	y	Dodo Power & Gas	Market offer
SA	SA Power	y	EnergyAustralia	Basic
SA	SA Power	y	EnergyAustralia	Flexi Saver
SA	SA Power	y	EnergyAustralia	Flexi Saver (max offer)
SA	SA Power	n	EnergyAustralia	Powerplan (max non solar)

State	Distributor	Solar?	Retailer	Residential retail tariff
SA	SA Power	y	EnergyAustralia	Powerplan (max solar)
SA	SA Power	y	EnergyAustralia	Rate fix
SA	SA Power	y	Lumo Energy	Advantage
SA	SA Power	y	Lumo Energy	Basic
SA	SA Power	y	Lumo Energy	Life
SA	SA Power	y	Lumo Energy	Movers
SA	SA Power	y	Lumo Energy	Velocity
SA	SA Power	y	Momentum Energy	SmilePower
SA	SA Power	y	Momentum Energy	SmilePower DD
SA	SA Power	y	Momentum Energy	SmilePower Flexi
SA	SA Power	y	Origin Energy	Maximiser
SA	SA Power	y	Origin Energy	Origin supply
SA	SA Power	y	Origin Energy	Rate freeze
SA	SA Power	y	Origin Energy	Saver
SA	SA Power	n	Red Energy	Living Energy Saver
SA	SA Power	n	Red Energy	No exit fee saver
SA	SA Power	n	Simply Energy	Green
SA	SA Power	y	Simply Energy	Green (Solar)
SA	SA Power	n	Simply Energy	No term fee
SA	SA Power	n	Simply Energy	Save
SA	SA Power	y	Simply Energy	Save (Solar)
VIC	AusNet	n	AGL	Fixed
VIC	AusNet	n	AGL	Savers
VIC	AusNet	y	AGL	Savers (Solar)
VIC	AusNet	n	AGL	Set and forget
VIC	AusNet	n	Alinta Energy	Fair Deal 35
VIC	AusNet	n	Alinta Energy	Harvey Norman
VIC	AusNet	n	Click Energy	Connect
VIC	AusNet	n	Click Energy	Natural
VIC	AusNet	n	Click Energy	Platinum
VIC	AusNet	y	Click Energy	Shine
VIC	AusNet	n	Click Energy	Superior
VIC	AusNet	y	Dodo Power & Gas	20 Percent
VIC	AusNet	y	EnergyAustralia	Basic
VIC	AusNet	y	EnergyAustralia	Flexi Saver
VIC	AusNet	n	EnergyAustralia	Flexi Saver Max no solar
VIC	AusNet	y	EnergyAustralia	Flexi Saver Max solar
VIC	AusNet	y	EnergyAustralia	Rate fix
VIC	AusNet	y	Lumo Energy	Advantage
VIC	AusNet	y	Lumo Energy	Life 10

State	Distributor	Solar?	Retailer	Residential retail tariff
VIC	AusNet	y	Lumo Energy	Movers
VIC	AusNet	y	Lumo Energy	Velocity
VIC	AusNet	y	Momentum Energy	SmilePower
VIC	AusNet	n	Momentum Energy	SmilePower DD
VIC	AusNet	y	Origin Energy	Maximiser
VIC	AusNet	y	Origin Energy	Origin supply
VIC	AusNet	y	Origin Energy	Rate Freeze
VIC	AusNet	y	Origin Energy	Saver
VIC	AusNet	n	Red Energy	Easy Saver
VIC	AusNet	y	Red Energy	Living Energy Saver
VIC	AusNet	n	Simply Energy	Green
VIC	AusNet	y	Simply Energy	Green
VIC	AusNet	n	Simply Energy	Guaranteed
VIC	AusNet	y	Simply Energy	Guaranteed
VIC	AusNet	n	Simply Energy	Guaranteed DD
VIC	AusNet	y	Simply Energy	Guaranteed DD
VIC	AusNet	n	Simply Energy	Guaranteed E-billing
VIC	AusNet	y	Simply Energy	Guaranteed E-billing
VIC	CitiPower	n	AGL	Fixed
VIC	CitiPower	n	AGL	Savers
VIC	CitiPower	y	AGL	Savers (Solar)
VIC	CitiPower	n	AGL	Set and forget
VIC	CitiPower	n	Alinta Energy	Fair Deal 35
VIC	CitiPower	n	Alinta Energy	Harvey Norman
VIC	CitiPower	n	Click Energy	Connect
VIC	CitiPower	n	Click Energy	Natural
VIC	CitiPower	n	Click Energy	Platinum
VIC	CitiPower	y	Click Energy	Shine
VIC	CitiPower	n	Click Energy	Superior
VIC	CitiPower	y	Dodo Power & Gas	20 Percent
VIC	CitiPower	y	EnergyAustralia	Basic
VIC	CitiPower	y	EnergyAustralia	Flexi Saver
VIC	CitiPower	n	EnergyAustralia	Flexi Saver Max no solar
VIC	CitiPower	y	EnergyAustralia	Flexi Saver Max solar
VIC	CitiPower	y	EnergyAustralia	Rate fix
VIC	CitiPower	y	Lumo Energy	Advantage
VIC	CitiPower	y	Lumo Energy	Life 10
VIC	CitiPower	y	Lumo Energy	Movers
VIC	CitiPower	y	Lumo Energy	Velocity
VIC	CitiPower	y	Momentum Energy	SmilePower

State	Distributor	Solar?	Retailer	Residential retail tariff
VIC	CitiPower	n	Momentum Energy	SmilePower DD
VIC	CitiPower	y	Origin Energy	Maximiser
VIC	CitiPower	y	Origin Energy	Origin supply
VIC	CitiPower	y	Origin Energy	Rate Freeze
VIC	CitiPower	y	Origin Energy	Saver
VIC	CitiPower	n	Red Energy	Easy Saver
VIC	CitiPower	y	Red Energy	Living Energy Saver
VIC	CitiPower	n	Simply Energy	Green
VIC	CitiPower	y	Simply Energy	Green
VIC	CitiPower	n	Simply Energy	Guaranteed
VIC	CitiPower	y	Simply Energy	Guaranteed
VIC	CitiPower	n	Simply Energy	Guaranteed DD
VIC	CitiPower	y	Simply Energy	Guaranteed DD
VIC	CitiPower	n	Simply Energy	Guaranteed E-billing
VIC	CitiPower	y	Simply Energy	Guaranteed E-billing
VIC	Jemena	n	AGL	Fixed
VIC	Jemena	n	AGL	Savers
VIC	Jemena	y	AGL	Savers (Solar)
VIC	Jemena	n	AGL	Set and forget
VIC	Jemena	n	Alinta Energy	Fair Deal 35
VIC	Jemena	n	Alinta Energy	Harvey Norman
VIC	Jemena	n	Click Energy	Connect
VIC	Jemena	n	Click Energy	Natural
VIC	Jemena	n	Click Energy	Platinum
VIC	Jemena	y	Click Energy	Shine
VIC	Jemena	n	Click Energy	Superior
VIC	Jemena	y	Dodo Power & Gas	20 Percent
VIC	Jemena	y	EnergyAustralia	Basic
VIC	Jemena	y	EnergyAustralia	Flexi Saver
VIC	Jemena	n	EnergyAustralia	Flexi Saver Max no solar
VIC	Jemena	y	EnergyAustralia	Flexi Saver Max solar
VIC	Jemena	y	EnergyAustralia	Rate fix
VIC	Jemena	y	Lumo Energy	Advantage
VIC	Jemena	y	Lumo Energy	Life 10
VIC	Jemena	y	Lumo Energy	Movers
VIC	Jemena	y	Lumo Energy	Velocity
VIC	Jemena	y	Momentum Energy	SmilePower
VIC	Jemena	n	Momentum Energy	SmilePower DD
VIC	Jemena	y	Origin Energy	Maximiser
VIC	Jemena	y	Origin Energy	Origin supply

State	Distributor	Solar?	Retailer	Residential retail tariff
VIC	Jemena	y	Origin Energy	Rate Freeze
VIC	Jemena	y	Origin Energy	Saver
VIC	Jemena	n	Red Energy	Easy Saver
VIC	Jemena	y	Red Energy	Living Energy Saver
VIC	Jemena	n	Simply Energy	Green
VIC	Jemena	y	Simply Energy	Green
VIC	Jemena	n	Simply Energy	Guaranteed
VIC	Jemena	y	Simply Energy	Guaranteed
VIC	Jemena	n	Simply Energy	Guaranteed DD
VIC	Jemena	y	Simply Energy	Guaranteed DD
VIC	Jemena	n	Simply Energy	Guaranteed E-billing
VIC	Jemena	y	Simply Energy	Guaranteed E-billing
VIC	Powercor	n	AGL	Fixed
VIC	Powercor	n	AGL	Savers
VIC	Powercor	y	AGL	Savers (Solar)
VIC	Powercor	n	AGL	Set and forget
VIC	Powercor	n	Alinta Energy	Fair Deal 35
VIC	Powercor	n	Alinta Energy	Harvey Norman
VIC	Powercor	n	Click Energy	Connect
VIC	Powercor	n	Click Energy	Natural
VIC	Powercor	n	Click Energy	Platinum
VIC	Powercor	y	Click Energy	Shine
VIC	Powercor	n	Click Energy	Superior
VIC	Powercor	y	Dodo Power & Gas	20 Percent
VIC	Powercor	y	EnergyAustralia	Basic
VIC	Powercor	y	EnergyAustralia	Flexi Saver
VIC	Powercor	n	EnergyAustralia	Flexi Saver Max no solar
VIC	Powercor	y	EnergyAustralia	Flexi Saver Max solar
VIC	Powercor	y	EnergyAustralia	Rate fix
VIC	Powercor	y	Lumo Energy	Advantage
VIC	Powercor	y	Lumo Energy	Life 10
VIC	Powercor	y	Lumo Energy	Movers
VIC	Powercor	y	Lumo Energy	Velocity
VIC	Powercor	y	Momentum Energy	SmilePower
VIC	Powercor	n	Momentum Energy	SmilePower DD
VIC	Powercor	y	Origin Energy	Maximiser
VIC	Powercor	y	Origin Energy	Origin supply
VIC	Powercor	y	Origin Energy	Rate Freeze
VIC	Powercor	y	Origin Energy	Saver
VIC	Powercor	n	Red Energy	Easy Saver

State	Distributor	Solar?	Retailer	Residential retail tariff
VIC	Powercor	n	Red Energy	Easy Saver
VIC	Powercor	y	Red Energy	Living Energy Saver
VIC	Powercor	y	Red Energy	Living Energy Saver
VIC	Powercor	n	Simply Energy	Green
VIC	Powercor	y	Simply Energy	Green
VIC	Powercor	n	Simply Energy	Guaranteed
VIC	Powercor	y	Simply Energy	Guaranteed
VIC	Powercor	n	Simply Energy	Guaranteed DD
VIC	Powercor	y	Simply Energy	Guaranteed DD
VIC	Powercor	n	Simply Energy	Guaranteed E-billing
VIC	Powercor	y	Simply Energy	Guaranteed E-billing
VIC	United Energy	n	AGL	Fixed
VIC	United Energy	n	AGL	Savers
VIC	United Energy	y	AGL	Savers (Solar)
VIC	United Energy	n	AGL	Set and forget
VIC	United Energy	n	Alinta Energy	Fair Deal 35
VIC	United Energy	n	Alinta Energy	Harvey Norman
VIC	United Energy	n	Click Energy	Connect
VIC	United Energy	n	Click Energy	Natural
VIC	United Energy	n	Click Energy	Platinum
VIC	United Energy	y	Click Energy	Shine
VIC	United Energy	n	Click Energy	Superior
VIC	United Energy	y	Dodo Power & Gas	20 Percent
VIC	United Energy	y	EnergyAustralia	Basic
VIC	United Energy	y	EnergyAustralia	Flexi Saver
VIC	United Energy	n	EnergyAustralia	Flexi Saver Max no solar
VIC	United Energy	y	EnergyAustralia	Flexi Saver Max solar
VIC	United Energy	y	EnergyAustralia	Rate fix
VIC	United Energy	y	Lumo Energy	Advantage
VIC	United Energy	y	Lumo Energy	Life 10
VIC	United Energy	y	Lumo Energy	Movers
VIC	United Energy	y	Lumo Energy	Velocity
VIC	United Energy	y	Momentum Energy	SmilePower
VIC	United Energy	n	Momentum Energy	SmilePower DD
VIC	United Energy	y	Origin Energy	Maximiser
VIC	United Energy	y	Origin Energy	Origin supply
VIC	United Energy	y	Origin Energy	Rate Freeze
VIC	United Energy	y	Origin Energy	Saver
VIC	United Energy	n	Red Energy	Easy Saver
VIC	United Energy	y	Red Energy	Living Energy Saver

State	Distributor	Solar?	Retailer	Residential retail tariff
VIC	United Energy	n	Simply Energy	Green
VIC	United Energy	y	Simply Energy	Green
VIC	United Energy	n	Simply Energy	Guaranteed
VIC	United Energy	y	Simply Energy	Guaranteed
VIC	United Energy	n	Simply Energy	Guaranteed DD
VIC	United Energy	y	Simply Energy	Guaranteed DD
VIC	United Energy	n	Simply Energy	Guaranteed E-billing
VIC	United Energy	y	Simply Energy	Guaranteed E-billing

The small business retail tariffs that were included in our analysis are listed in Table A-2.

TABLE A.2 SMALL BUSINESS RETAIL TARIFFS SOURCED FOR THE BENCHMARKING ANALYSIS

State	Distributor	Retailer	Small business retail tariff
NSW	Ausgrid	AGL	AGL Business Maximiser
NSW	Ausgrid	Lumo Energy	Lumo Business Premium -LUM111886MS
NSW	Ausgrid	Momentum Energy	EA050)
NSW	Ausgrid	Origin Energy	General Supply - All Time
NSW	Ausgrid	Red Energy	Business Offer: Living Energy Saver
NSW	Ausgrid	Simply Energy	Ausgrid - Tariff GEN SINGLE (Peak Only)
NSW	Endeavour	AGL	General Supply All Time Peak
NSW	Endeavour	Energy Australia	Electricity Charges: Peak
NSW	Endeavour	Lumo Energy	Lumo Business Premium - LUM111862MS
NSW	Endeavour	Momentum Energy	Momentum Smile Power E
NSW	Endeavour	Origin Energy	General Supply - All Time
NSW	Endeavour	Red Energy	Business Offer: Living Energy Saver
NSW	Endeavour	Simply Energy	Endeavour
NSW	Essential Energy	AGL	AGL Business Maximiser
NSW	Essential Energy	Energy Australia	Everyday Saver - Business Peak
NSW	Essential Energy	Lumo Energy	Lumo Business Premium - LUM111892MS
NSW	Essential Energy	Momentum Energy	BLNN1AU)
NSW	Essential Energy	Origin Energy	General Supply - All Time
NSW	Essential Energy	Red Energy	Business Offer: Living Energy Saver
NSW	Essential Energy	Simply Energy	Essential - Tariff GEN SINGLE (Peak Only)
QLD	Energex	AGL	Tariff 20 - General Supply Peak
QLD	Energex	Click Energy	Tariff 20 - General Supply (8500)
QLD	Energex	Energy Australia	Electricity Charges: Peak
QLD	Energex	Lumo Energy	Lumo Business Premium - LUM111938MS
QLD	Energex	Origin Energy	General Supply (Tariff 20)
SA	SA Power	Energy Australia	Electricity Charges: Peak
SA	SA Power	Lumo Energy	Lumo Business Premium - LUM111757MS Customer
SA	SA Power	Momentum Energy	(QBSR)
SA	SA Power	Red Energy	Business Offer: Living Energy Saver

State	Distributor	Retailer	Small business retail tariff
SA	SA Power	Simply Energy	SA Power Networks - Tariff 126 (Peak Only (SA))
SA	SA Power	AGL	General Supply 126 peak
SA	SA Power	Alinta Energy	Small Business Electricity Rates - 126 & 126M
SA	SA Power	Origin Energy	126 Qtly General Supply
VIC	AusNet	AGL	AGL Business Trader (E)
VIC	AusNet	Alinta Energy	Small Business Single Rate
VIC	AusNet	Energy Australia	Electricity Charges: Peak
VIC	AusNet	Lumo Energy	Lumo Business Premium
VIC	AusNet	Dodo Power & Gas	GSTBusiness Single Rate ^A E3SPB-MAT1
VIC	AusNet	Momentum Energy	(NEE12)
VIC	AusNet	Origin Energy	Business Peak Anytime (Tariff E, G, B or N)
VIC	AusNet	Red Energy	Business Offer: Living Energy Saver
VIC	AusNet	Simply Energy	AusNet Services - Tariff E (Peak Only)
VIC	CitiPower	AGL	AGL Business Trader (E)
VIC	CitiPower	Alinta Energy	Small Business Single Rate
VIC	CitiPower	Energy Australia	Electricity Charges: Peak
VIC	CitiPower	Lumo Energy	Lumo Business Premium
VIC	CitiPower	Dodo Power & Gas	Business Single Rate ^A E3CPB-MAT1
VIC	CitiPower	Momentum Energy	(C1G)
VIC	CitiPower	Origin Energy	Business Peak Anytime (Tariff E, G, B or N)
VIC	CitiPower	Red Energy	Business Offer: Living Energy Saver
VIC	CitiPower	Simply Energy	CitiPower - Tariff E (Peak Only)
VIC	Jemena	AGL	AGL Business Trader (E)
VIC	Jemena	Alinta Energy	Small Business Single Rate
VIC	Jemena	Energy Australia	Everyday Saver - Business
VIC	Jemena	Lumo Energy	Lumo Business Premium
VIC	Jemena	Dodo Power & Gas	Business Single Rate ^A E3JNB-MAT1
VIC	Jemena	Momentum Energy	(A200)
VIC	Jemena	Origin Energy	Business Peak (Tariffs E, G, B or N)
VIC	Jemena	Red Energy	Business Offer: Living Energy Saver
VIC	Jemena	Simply Energy	Jemena - Tariff E (Peak Only)
VIC	Powercor	AGL	AGL Business Maximiser
VIC	Powercor	Alinta Energy	Small Business Single Rate
VIC	Powercor	Energy Australia	Electricity Charges: Peak
VIC	Powercor	Lumo Energy	Lumo Business Premium
VIC	Powercor	Dodo Power & Gas	Business Single Rate ^A E3PCB-MAT1
VIC	Powercor	Momentum Energy	(ND1)
VIC	Powercor	Origin Energy	Business Peak Anytime (Tariff E, G, B or N)
VIC	Powercor	Red Energy	Business Offer: Living Energy Saver
VIC	Powercor	Simply Energy	Powercor - Tariff E (Peak Only)

State	Distributor	Retailer	Small business retail tariff
VIC	United Energy	AGL	AGL Business Trader (E)
VIC	United Energy	Alinta Energy	Small Business Single Rate
VIC	United Energy	Energy Australia	Electricity Charges: Peak
VIC	United Energy	Lumo Energy	Lumo Business Premium
VIC	United Energy	Dodo Power & Gas	Business Single Rate ^A E3UEB-MAT1
VIC	United Energy	Momentum Energy	(LVM1R)
VIC	United Energy	Origin Energy	Business Peak Anytime (Tariff E, G, B or N)
VIC	United Energy	Red Energy	Business Offer: Living Energy Saver
VIC	United Energy	Simply Energy	United Energy - Tariff E (Peak Only (UNITED))



B

AVERAGE RETAILER COSTS

The average fixed and variable retailer costs, for the most efficient residential tariffs offered by each of the retailers included in our dataset, across each of the distribution areas, are set out in Table B-1. To ensure that the retailer costs are comparable, they have all been calculated on the basis of the average residential consumption in Energex's area (4,640 kWh per annum).

TABLE B.1 AVERAGE RETAILER COST FOR RESIDENTIAL TARIFFS

Retailer	Variable retail cost	Fixed retailer cost	Variable retailer cost	Total retailer cost	Fixed as a % of total retailer cost	Variable as a % of total retailer cost
	c per kWh	\$ per annum	\$ per annum	\$ per annum	per cent	per cent
Simply	2.22	92.07	102.99	195.06	47%	53%
Energy Australia	1.07	148.21	49.83	198.03	75%	25%
Alinta	0.67	167.70	31.13	198.83	84%	16%
Origin	2.15	115.31	99.69	215.00	54%	46%
Red Energy	2.18	117.59	101.20	218.79	54%	46%
Lumo	2.71	96.93	125.81	222.74	44%	56%
M2	2.41	115.79	111.82	227.61	51%	49%
AGL	2.18	148.72	101.12	249.84	60%	40%
Momentum	2.78	156.85	128.99	285.84	55%	45%
Click	3.74	134.52	173.62	308.15	44%	56%
Average	2.25	127.93	104.28	232.21	55%	45%
Maximum	3.74	167.70	173.62	308.15	84%	56%
Minimum	0.67	92.07	31.13	195.06	44%	16%
Median	2.20	126.05	102.09	220.76	54%	46%

Note: The average is the average across the data points. The maximum, minimum and median are the maximum, minimum and median of the retailer averages.

SOURCE: ACIL ALLEN

The average fixed and variable retailer costs, for the most efficient small business tariffs offered by each of the retailers included in our dataset, across each of the distribution areas, are set out in Table B-2. To ensure that the retailer costs are comparable, they have all been calculated on the basis of the average residential consumption in Energex's area (16,370 kWh per annum).

TABLE B.2 AVERAGE RETAILER COST FOR SMALL BUSINESS TARIFFS

Retailer	Variable retail cost	Fixed retailer cost	Variable retailer cost	Total retailer cost	Fixed as a % of total retailer cost	Variable as a % of total retailer cost
	c per kWh	\$ per annum	\$ per annum	\$ per annum	per cent	per cent
Click	1.26	201.11	206.75	407.86	49%	51%
Alinta	1.44	242.50	235.97	478.47	51%	49%
Lumo	1.76	195.91	288.73	484.63	40%	60%
Simply	2.19	129.77	359.10	488.86	27%	73%
Origin	2.12	151.14	347.35	498.48	30%	70%
AGL	2.08	206.10	340.08	546.18	38%	62%
Momentum	2.93	211.51	478.89	690.40	31%	69%
M2	3.52	142.55	576.71	719.26	20%	80%
Red Energy	3.62	154.43	592.51	746.94	21%	79%
Energy Australia	3.61	189.61	591.08	780.69	24%	76%
Average	2.58	181.56	422.23	603.79	30%	70%
Max	3.62	242.50	592.51	780.69	51%	80%
Min	1.26	129.77	206.75	407.86	20%	49%
Median	2.16	192.76	353.22	522.33	30%	70%

Note: The average is the average across the data points. The maximum, minimum and median are the maximum, minimum and median of the retailer averages.

SOURCE: ACIL ALLEN

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