

Victorian Default Offer to apply from 1 July 2019

Advice to Victorian Government

3 May 2019

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Glossary

Term	Definition
ACCC	Australian Competition and Consumer Commission
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AMI	Advanced Metering Infrastructure (i.e. smart meters)
ASX	Australian Stock Exchange
CARC	Customer acquisition and retention costs
DLF	Distribution Loss Factors
DNSP	Distribution Network Service Provider
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortisation
ESC	Essential Services Commission
ESCOSA	Essential Services Commission of South Australia
FiT	Feed-in Tariff
FRC	Full Retail Competition
ICRC	Independent Competition and Regulatory Commission (Australian Capital Territory)
IPART	Independent Pricing and Regulatory Tribunal (New South Wales)
kWh	Kilowatt Hours
LGC	Large-scale Generation Certificate
LRET	Large-scale Renewable Energy Target
MLF	Marginal Loss Factor
Monte Carlo Simulation	The process of using repeated random sampling to obtain a numerical result
MRIM	Manually Read Interval Meter
MWh	Megawatt Hour

NECF	National Energy Customer Framework
NEM	National Electricity Market
NER	National Electricity Rules
NERL	National Energy Retail Law
NUOS	Network Use Of System
OOE	Office of Energy (Western Australia)
OTTER	Office of the Tasmanian Economic Regulator
PDF	Payment Difficulty Framework
PPA	Power Purchasing Agreement
QCA	Queensland Competition Authority
REPI	Retail Electricity Pricing Inquiry
RERT	Reliability and Emergency Reserve Trader
ROC	Retail Operating Costs
RPP	Renewable Power Percentage
SRES	Small-scale Renewable Energy Scheme
STC	Small-scale Technology Certificate
STP	Small-scale Technology Percentage
ToR	Terms of Reference
ToU	Time of Use
VDO	Victorian Default Offer
VEEC	Victorian Energy Efficiency Certificates
VEU	Victorian Energy Upgrades
WACC	Weighted Average Cost of Capital

Summary

This paper sets out our advice to the Victorian Government on the Victorian Default Offer

- In December 2018, the Essential Services Commission (commission) received terms of reference from the Victorian Government to provide advice on the methodology and price for the Victorian Default Offer (VDO) for electricity retail services.
- This paper sets out our final advice, in accordance with our terms of reference and informed by our consultation process. All evidence supplied and views raised by stakeholders in written submissions and at public events have been considered by the commission in developing our advice.
- The VDO will be available to residential and small business customers from 1 July 2019.¹ It will specify the prices charged to residential and small business customers on standing offer contracts.² While the VDO will be available to all these customers, electricity retail businesses will continue to have flexibility to offer prices that differ from the VDO through market contracts.

Our advice means annual electricity bills for customers on standing offers will fall

- If the government adopts our advice, typical residential customers on standing offers and using 4,000 kWh of electricity per year would see their annual electricity bills reduce by between around \$310 and \$450, when compared with the median standing offer in their distribution zone (see map below).³
- If the government adopts our advice, typical small business customers on standing offers and using 20,000 kWh of electricity per year would see their annual electricity bills reduce by around \$1,380 and \$2,050, when compared with the median standing offer in their distribution zone (see map below).⁴
- The charts below compare our recommended VDO price (by distribution zone) to market offers and standing offers.

¹ Residential and small business customers means customers who purchase power for personal, household or domestic use, or consume no more than 40 megawatt hours (MWh) in a year for business use.

² Under a draft Order in Council released by the Department of Environment, Land, Water and Planning, the VDO will apply to flat tariff standing offer contracts from 1 July 2019.

³ Based on a typical residential annual consumption of 4,000 kWh per year. Actual savings will depend on each customer's consumption and their current standing offer rates. Estimated savings are based on flat usage tariff offers on Victorian Energy Compare as at 28 February 2019.

⁴ Based on a small business annual consumption of 20,000 kWh per year. Actual savings will depend on each customer's consumption and their current standing offer rates. Estimated savings are based on flat usage tariff offers on Victorian Energy Compare as at 28 February 2019.

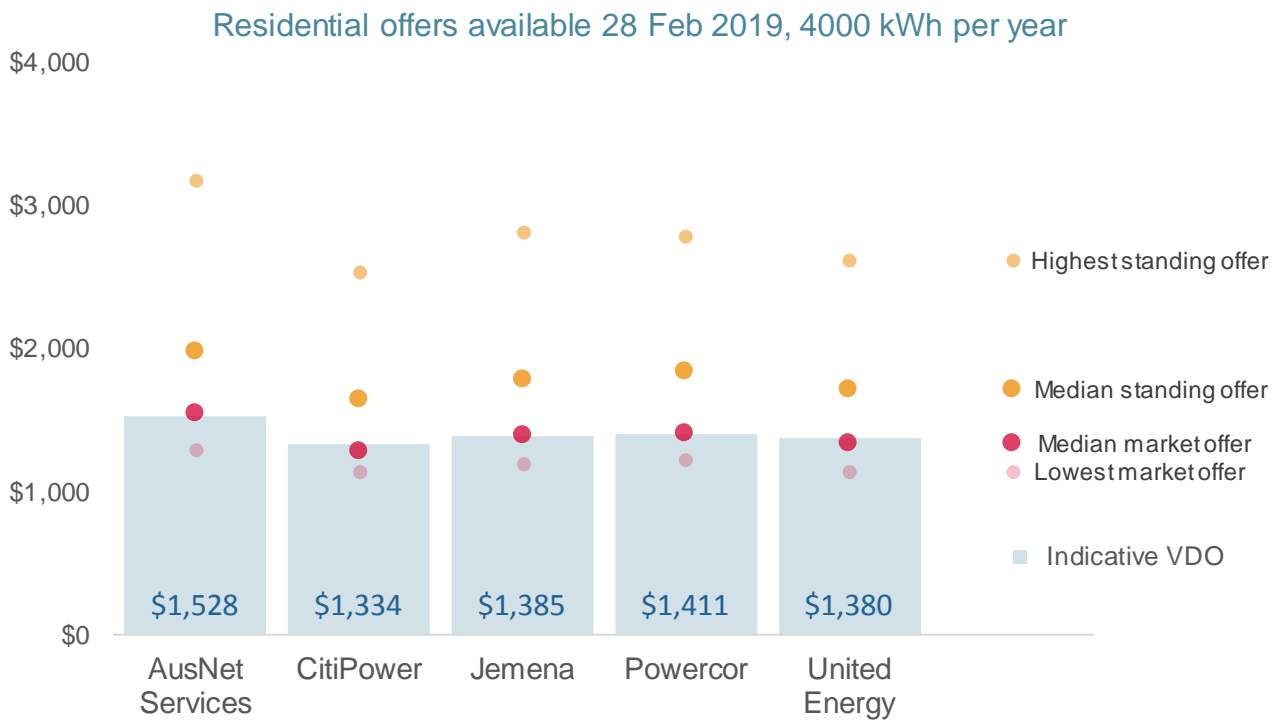


Figure 1 Comparison of the VDO to other available offers, typical residential customer (GST inclusive)

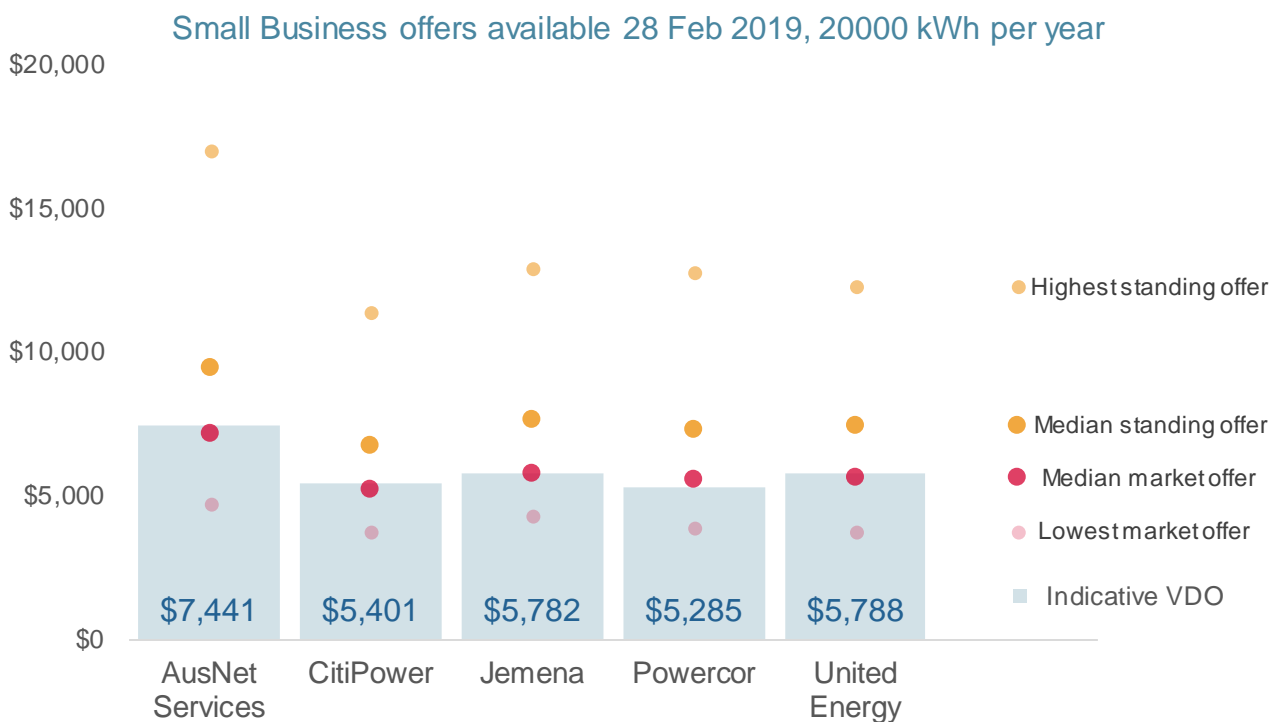


Figure 2 Comparison of the VDO to other available offers, typical small business customer (GST inclusive)

Summary

We have estimated the price for the VDO using a cost-based approach

- We have used a cost-based approach to estimate the VDO, as it transparently sets out each of the costs included in calculating the VDO. Moreover, it is an approach that has been used by a range of other economic regulators when setting electricity prices.
- Our advice separately calculates costs for:
 - wholesale electricity costs
 - network costs (including metering)
 - environmental scheme costs
 - retail operating costs
 - customer acquisition and retention costs
 - retail margin
 - other costs (e.g. regulatory and licence fees, ancillary charges)

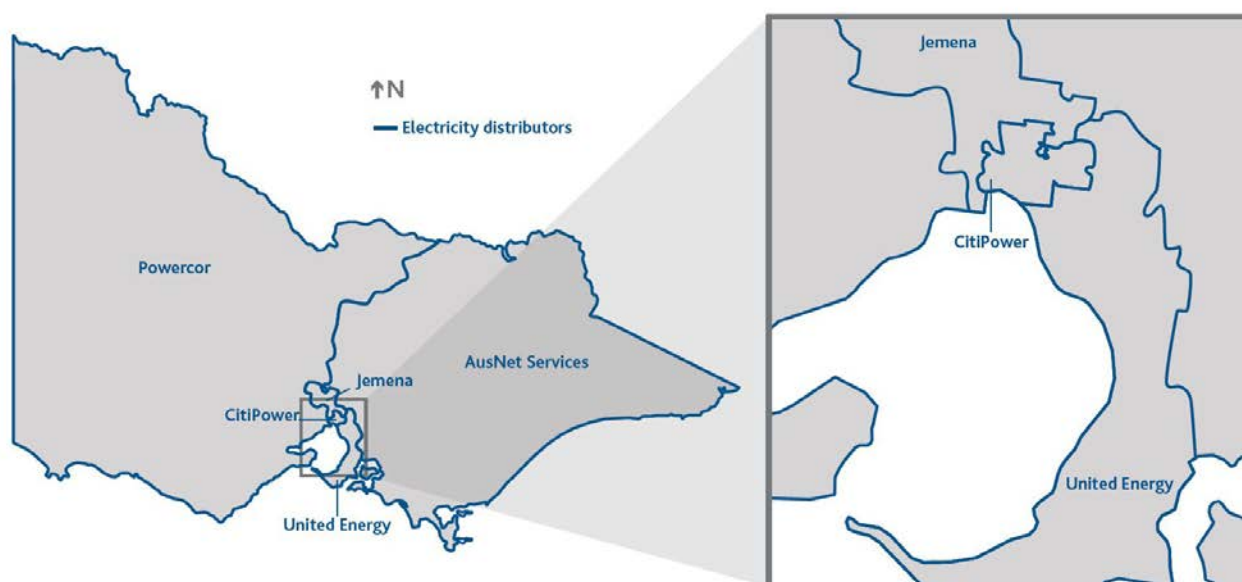


Figure 3 Victorian Electricity Distribution zones

Differences from our draft advice are mainly explained by movements in market data and changes in our approach to wholesale and retail costs, reflecting stakeholder feedback

- Based on an estimated annual electricity bill for a typical residential customer on a standing offer, our final advice proposes a VDO that is around \$75 higher than the amount proposed in our draft advice, depending on the distribution zone.
- The main reasons for the increase are changes in market data (affecting estimates of wholesale electricity and environmental costs), and a change in our approach to estimating wholesale, environmental and retail costs.
- The chart below sets out the estimated impacts on customer bills for a typical residential customer in the Jemena distribution zone, consuming 4,000 kWh per annum.

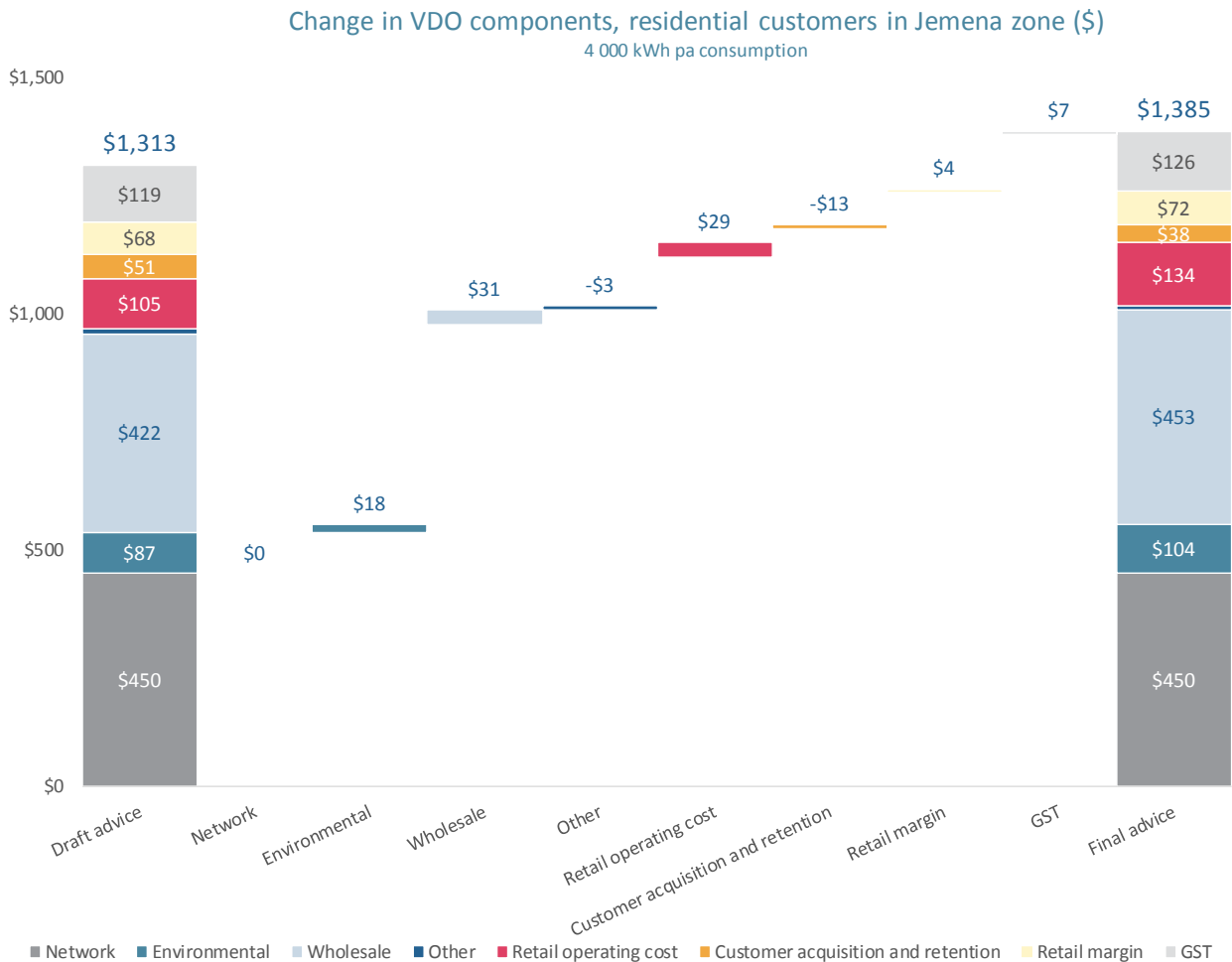


Figure 4 Dollar value changes to VDO components, residential customers in Jemena zone (GST inclusive)

- Notable changes between our draft and final advice are found in the following components:
 - Wholesale electricity costs – market prices have increased significantly since early 2019, driving the majority of the increase in costs. We have also separately estimated the costs for residential and small business customers because of differences in the timing and pattern of electricity consumption. This generally raises costs for residential customers and lowers costs for small business customers, relative to our draft advice. Increases have been partly offset by a reduction in network losses set by the Australian Energy Market Operator.
 - Retail operating costs – the commission received data from some retailers that indicated the benchmark in our draft advice may not cover all relevant operating costs in running a retail business or new regulatory costs. We have adjusted our allocation based on further investigation of the data available to us.
 - Customer acquisition and retention costs – in response feedback from stakeholders we have adjusted our ‘modest’ allowance.

- o Environmental costs – in the period between our draft and final advice the Clean Energy Regulator updated the liabilities on retailers for 2019. Both the small and large scale renewable energy liabilities increased. In addition, the commission updated our approach to estimating large scale certificate costs to align with our approach to wholesale costs. These increases were partly offset in some zones by changes in the revised network loss factors set by the Australian Energy Market Operator.

1. Introduction

On 18 December 2018 the Assistant Treasurer provided the commission with terms of reference under Section 10(g) of the *Essential Services Act 2001*, requesting advice in relation to the Victorian Government's decision to introduce the Victorian Default Offer (VDO) for residential and small business customers.

1.1. Terms of reference

The terms of reference (Appendix A) set out the request for the commission to develop a methodology and recommend an efficient price (or prices) for the VDO. The terms of reference note the VDO will:

- be offered unconditionally by each licensed electricity retailer to all residential and small business customers⁵ including those residential and small business customers who export power under feed-in tariffs;
- be the price that a retailer can charge under the VDO arrangement and is to be established as the basis for retail discounts;
- adopt the terms and conditions for standard retail contracts (i.e. standing offers); and
- be based on current marketing standards and practices.

In addition to this, the terms of reference also set out some further detail about how the VDO price should be structured and what it may include. The VDO should:

- be set for each distribution zone;
- be based on the efficient cost to run a retail business;
- include an allowance for a maximum retail profit margin;
- include a modest allowance for customer acquisition and retention costs; and
- not include an allowance for headroom.⁶

The background in the terms of reference states that the VDO is intended to provide a simple, trusted and reasonably priced option that safeguards customers unable or unwilling to engage in

⁵ As defined in the terms of reference, residential and small business customers means customers who purchase power for personal, household or domestic use, or consume no more than 40 megawatt hours (MWh) in a year for business use.

⁶ For the purposes of our advice on the VDO, we have defined headroom as an allowance in a regulated price that does not reflect a cost borne by firms operating in the market. We note that typically, headroom is a transitional allowance intended to attract competitors when markets are in the process of being deregulated.

the retail electricity market without impeding the consumer benefits experienced by those who are active in the market.

In developing our advice, we are required to have regard to our objectives under the *Essential Services Act 2001* (ESC Act) and the *Electricity Industry Act 2000* (EI Act), findings from the Independent Review of Electricity and Gas Retail Markets in Victoria (the independent review), the government's published response to the independent review, advice from relevant experts, and any other matters we deem relevant.

The terms of reference also required us to engage with an expert panel appointed by the Minister for Energy, Environment and Climate Change, to advise the Assistant Treasurer and the Minister for Energy, Environment and Climate Change about our progress and final approach, and to consult publicly.

1.2. Our process and consultation

After receiving our terms of reference, commission staff released a working paper to commence our consultation process.⁷ The paper set out initial staff views on how the VDO price (or prices) might be calculated, and the consultation process the commission would follow. Commission staff invited stakeholders to provide written submissions in response to the paper.

On 21 January 2019, the commission hosted a technical workshop on the methodology proposed in the staff paper. The workshop included attendees from a range of retailers, consumer advocacy groups, other government agencies, and distribution businesses. There was opportunity to provide comments and address issues on the day. The workshop was also designed to help inform written submissions from stakeholders responding to the staff paper.

We received 17 written submissions in response to the staff working paper (listed at Appendix D).⁸ The submissions and discussion at the technical workshop helped to inform the commission's draft advice to the Victorian Government, which we released publicly on 8 March 2019. The draft advice set out the commission's proposed methodology for setting prices for the VDO.

The commission hosted a public forum focussing on its draft advice on 25 March 2019. The forum provided stakeholders with an opportunity to hear from the commission, consumer advocates and industry, ahead of submissions to the draft advice closing on 4 April 2019. We also engaged with the expert panel, which included a meeting to discuss its views on the proposed approach set out in our draft advice.

⁷ Essential Services Commission, Victorian Default Offer for domestic and small business electricity customers: Staff working paper, December 2018.

⁸ The submissions are available on our website at www.esc.vic.gov.au

We received 26 public written submissions in response to our draft advice (listed at Appendix E).⁹

We have considered all feedback received in submissions and at our public forums in preparing our advice. Later sections of this report provide more detail about how we have considered feedback.

1.3. New legislation and draft pricing order

On 21 March 2019 legislation was passed allowing the Governor in Council (on advice from the Minister for Energy, Environment and Climate Change) to regulate a price for standard retail contracts (also known as standing offers).¹⁰ The legislation also allows the Governor in Council to provide the commission with the power to make a price determination for standard retail contracts under section 33 of the ESC Act.

The Department of Environment, Land, Water and Planning is consulting on a draft Order under which the Governor in Council (on advice from the Minister for Energy, Environment and Climate Change) would specify prices for standard retail contracts from 1 July 2019 to 31 December 2019.

For the avoidance of doubt, we have considered the matters in our terms of reference and not the draft Order in preparing this advice. We also note this advice paper is not a price determination under section 33 of the ESC Act.

1.4. How will the VDO differ from market offers?

While the VDO is proposed to replace standing offer prices, it will also be available on request to customers who do not automatically receive the VDO. As noted by the Minister for Energy, Environment and Climate Change:

‘For every other Victorian household, they’ll be entitled to ring up their retailer and ask them to switch onto the Victorian default offer if they think that it’s the best offer for them.’¹¹

The legislation does not prevent retailers from making market offers available to customers that differ from the VDO. This aligns with the recommendation from the independent review, which suggested retailers would be able to offer alternatives in the market above or below the proposed regulated basic service offer price. As noted by the review:

⁹ The submissions are available on our website at www.esc.vic.gov.au

¹⁰ Energy Legislation Amendment (Victorian Default Offer) Act 2019.

¹¹ ‘Daniel Andrews to set a default offer on energy bills from July 1’, The Australian, 19 February 2019.

“Retailers would be free to continue to offer additional offers at different prices which, may be lower than the ‘no frills’ option, or higher, to give consumers the choice to pay for any additional value offered by retailers.”¹²

¹² Independent Review Panel, Independent Review of the Electricity and Gas Retail Markets in Victoria, August 2017, p. x.

2. Our approach to addressing the terms of reference

The terms of reference requesting our advice require the commission to have regard to our objectives under the ESC Act, the EI Act, the findings of the independent review (including the government's final response)¹³, advice from relevant experts and any other matters it deems relevant.

The commission's draft advice set out how we interpreted the terms of reference in forming our recommendations.¹⁴ Broadly, we sought to recommend a methodology that is consistent with the requirement in our terms of reference that the VDO should be based on the efficient costs to run a retail business. We considered this was consistent with the government's objective for the VDO to provide customers with access to a simple option that represents a 'reasonably priced' contract for electricity.

Our draft advice also explained how we had considered matters in the ESC Act and EI Act, and the findings of the independent review and the government's final response.

2.1. Feedback on our draft advice

A number of submissions from electricity retailers considered our draft advice did not have sufficient regard to, or failed to observe, our terms of reference or the ESC and EI Acts.

Some respondents thought our draft advice did not sufficiently address the statement in the terms of reference that the VDO should be available to customers '... without impeding the consumer benefits experienced by those who are active in the market.'¹⁵ On this, we reaffirm the position in our draft advice. We consider this statement in the background of the terms of reference to be an articulation of the government's policy intent (that is, that the VDO is not intended to be a single, mandatory price to the exclusion of all others), and not a factor we must take into account in recommending a price.¹⁶ As noted below, our analysis also indicates that there are many offers in the market that may provide benefit to those consumers who are active in the market (see Appendix F).

¹³ Victorian Government 2019, Final Response to the Independent Review of the Electricity and Gas Retail Markets in Victoria, 26 October.

¹⁴ Essential Services Commission 2019, Victorian Default Offer to apply from 1 July 2019: Draft advice, 8 March.

¹⁵ See for example: amaysim, submission to the Essential Services Commission Draft Advice to the Victorian Government, April 2019, pp. 3-4, Sumo, submission to the Essential Services Commission Draft Advice to the Victorian Government, April 2019, p. 10

¹⁶ Essential Services Commission 2019, Victorian Default Offer to apply from 1 July 2019: Draft advice, 8 March

A number of submissions from electricity retailers considered our draft advice would have negative impacts on innovation, competition, or customer interests; for example, through higher prices in the long-run or reduced service quality.¹⁷ Submissions from some electricity retailers also stated the VDO recommended in our draft advice was too low.¹⁸ A number of submissions also considered the commission should undertake an assessment of our proposed VDO price on the market and competition.¹⁹

As noted above, our draft advice sought to recommend a price that reflects efficient costs to run a retail business. We have also considered that there are sufficient retail energy services to supply all Victorian electricity customers. We consider a price based on efficient costs is consistent with customer interests. This was supported in a joint submission to the commission by consumer representative groups, which noted we should focus on setting an efficient price for the VDO.²⁰

Setting a VDO price based on efficient costs supports the provision of retail services to VDO customers. No submissions received during our consultation process suggested that customers would be unable to access retail energy services at our proposed VDO prices.

Further, setting prices at efficient costs does not preclude competition or innovation that may lead to customers accepting market contracts that offer a better deal for them than the VDO.²¹ Likewise, it does not prevent retailers who can lower their costs from attracting customers by making cheaper market offers available (as noted in our term of reference).

A number of submissions considered the VDO would inhibit market offers and the ability for customers to shop around and seek a better deal.²² While we have focused on recommending a VDO price that reflects efficient costs, later in our report (Appendix F) we show that our

¹⁷ See for example: Australian Energy Council, submission to the Essential Services Commission Draft advice to the Victorian Government, April 2019, p. 2, Powershop and MEA Group, submission to the Essential Services Commission Draft advice to the Victorian Government, April 2019, p. 1.

¹⁸ See for example: Alinta Energy, submission to the Essential Services Commission Draft Advice to the Victorian Government, April 2019, p. 1, Sumo, submission to the Essential Services Commission Draft Advice to the Victorian Government, April 2019, p. 1.

¹⁹ See for example: EnergyAustralia, submission to the Essential Services Commission Draft advice to the Victorian Government, April 2019, p. 2, AGL, submission to the Essential Services Commission Draft advice to the Victorian Government, April 2019, p. iv.

²⁰ The Victorian Council of Social Services et al, submission to the Essential Services Commission Draft advice to the Victorian Government – joint submission by the Victorian Council of Social Service, the Consumer Action Law Centre, the Financial and Consumer Rights Council and the Council on the Ageing Victoria, April 2019, p. 5.

²¹ We note that the terms of reference preclude us from making an allowance for 'headroom', which can be used to promote competition or market entry through a separate (non-cost based) allowance in the cost stack.

²² See for example: AGL, submission to the Essential Services Commission Draft advice to the Victorian Government, April 2019, p. iii, Origin Energy, submission to the Essential Services Commission Draft advice to the Victorian Government, April 2019, p. 1 Sumo, submission to the Essential Services Commission Draft Advice to the Victorian Government, April 2019, p. 2.

2. Our approach to addressing the terms of reference

recommended VDO prices would be higher for some consumers than many offers currently in the market. If these are genuine and enduring offers, then it suggests there will continue to be scope for customers to seek a lower price than the VDO by shopping around.

A number of submissions also identified concerns with our proposed approach to particular parts of the electricity retail cost stack. Some respondents considered our approach was inconsistent with our terms of reference. We address this feedback in Chapter 3.

The commission has not undertaken an assessment of the impacts of our recommendations on the electricity retail market and competition. We note the terms of reference do not request this analysis. However, as already noted, none of the submissions we received, and none of the commentary offered at our public forum, suggested that customers would be unable to access to retail services to procure their electricity following the introduction of the VDO.

A number of submissions raised other matters relating to government policy.²³ We have considered that these policy matters are outside the scope of the terms of reference.

2.2. Approach for our final advice

Below, we provide an overview of how the commission has interpreted the terms of reference for our advice, taking into account stakeholder feedback on our draft advice.

Section 8(1) of the ESC Act states that ‘the objective of the Commission is to promote the long-term interests of Victorian consumers.’ Section 8A lists a number of matters we must have regard to, ‘to the extent that they are relevant in any particular case’. We consider the three most relevant matters regarding this advice are sections 8A(1)(a) to (c), namely:

- a) efficiency in the industry and incentives for long term investment;
- b) the financial viability of the industry; and
- c) the degree of, and scope for, competition within the industry, including countervailing market power and information asymmetries.

Our terms of reference and subsequent statements from the Premier and Minister for Energy, Environment and Climate Change (including the VDO Bill’s second reading in Parliament)²⁴ also make clear that the purpose of the VDO is to provide customers with universal access to a ‘fair’ priced electricity offer. The terms of reference also provide further guidance on how we might

²³ See for example: Australian Energy Council, submission to the Essential Services Commission Draft advice to the Victorian Government, April 2019; ACCC, submission to the Essential Services Commission Draft advice to the Victorian Government, April 2019.

²⁴ Energy Legislation Amendment (Victorian Default Offer) Bill 2019, Second Reading.

consider fairness in the context of the matters to which we must have regard. Specifically, it entails making allowances in the VDO for:

- the efficient cost to run a retail business
- a maximum retail profit margin
- modest customer acquisition and retention costs

but not including an allowance for headroom.

In this context, the term headroom refers to a regulatory allowance that is unrelated to efficient costs of providing the service. In other words, the terms of reference make clear that retailers should not earn excess returns (or profits) from customers on the VDO.

The terms of reference contemplate a fair outcome as one in which customers on the VDO are only paying for the 'efficient cost to run a retail business'. We have assumed a standard economic definition in interpreting this to mean:

- The VDO is cost reflective — that is, it reflects the cost a retailer incurs in procuring, delivering and selling electricity to a customer who is on the VDO. Customers on a VDO should be neither the beneficiaries, nor the source, of cross-subsidies between different customer groups.
- Retailers are expected to optimise their operations to ensure the costs of procuring, delivering and selling electricity to customers on the VDO reflect the sustainable costs (including profit) of providing these retail services.
- In considering efficiency there should also be sufficient retail capacity in the market to service all Victorian customers should they wish to enter a VDO contract for the supply of their electricity.

It is important to note that our approach does not seek to reflect the costs of a particular electricity retailer in the VDO price.

Rather, we establish an estimate or benchmark of the efficient cost for a retailer to deliver the services covered by the VDO. For any particular electricity retailer, the cost of individual elements in our cost stack may differ (higher or lower) from the benchmark costs identified in our advice. Chapter 3 describes the approach we have taken to estimating costs for different parts of the electricity retail cost stack. An overview is provided below.

There are well established methodologies for estimating electricity retailers' efficient wholesale, network and environmental costs. In December 2018, commission staff began consulting on the available options, with the March 2019 draft advice setting out the commission's initial views. This paper outlines the methodologies we recommend for calculating each of these cost components.

Estimating efficient retail operating costs is less straightforward. To estimate these costs, our draft advice relied on data published in 2018 by the ACCC. We also considered other information such as data in public reports, and cost benchmarks adopted by regulators in other jurisdictions. In

2. Our approach to addressing the terms of reference

response to our draft advice, some electricity retailers provided us with confidential information about their costs. We thank them for doing so. Our final advice has considered this additional information but does not identify individual retailers' costs given the commercial and competitive sensitivity of this information.

Our approach seeks to ensure the benchmark for retail operating costs reflects efficient costs, is sustainable and supports the adequate provision of retail services to VDO customers. We have adopted this approach having regard to the financial viability of the industry and incentives for long term investment.

The terms of reference require that the VDO reflects the regulated terms and conditions for standard retail contracts. We have assumed therefore, that government expects the quality of service experienced by customers to at least continue to meet these regulated terms and conditions.

This paper also outlines how we have approached the task of identifying a 'modest allowance for customer acquisition and retention costs' (CARC) and a 'maximum retail profit margin'.

Finally (and as noted above), the VDO will be made available to customers 'without impeding the consumer benefits experienced by those who are active in the market.'²⁵ We understand this statement to be an articulation of the government's policy intent – that is, that the VDO is not intended to be a single, mandatory price to the exclusion of all others. Retailers will not be prohibited from making other offers available to customers, leaving customers free to enter these alternative contracts if they represent good value for money (even if they cost more than the VDO). On this basis, we have interpreted this statement in the terms of reference as a background statement of the government's policy intent rather than a factor which we are instructed to take into account when developing a pricing methodology.

We have also had regard to our objectives under the EI Act.²⁶ Consistent with our objectives under the ESC Act and the policy background outlined in our terms of reference, we have developed the VDO as a safeguard that protects customers 'unable or unwilling to engage in the retail electricity market'.²⁷ As retailers will still be free to compete for customers in the market by making offers above and below the VDO, we note that our approach to the VDO is consistent with the objective in the EI Act relating to full retail competition.

²⁵ As mentioned in our terms of reference.

²⁶ The objectives outlined in section 10 of the EI Act refer to: consistency between the regulation of the electricity and gas industries to the extent it is efficient and practicable to do so; promotion of full retail competition; and promoting protections for customers, including in relation to assisting customers who are facing payment difficulties.

²⁷ As mentioned in our terms of reference.

2. Our approach to addressing the terms of reference

The objective to maintain consistency between electricity and gas regulation is not applicable in this case as we have not been asked to develop a VDO for gas at this point. We understand that the government plans to establish a VDO for gas in the future.

The government has also separately requested that the commission implement a number of other recommendations from the independent review that address the confusing marketing practices observed in the retail energy market. Those recommendations are designed to assist engaged customers seeking to find the most suitable deal for their circumstances. As such, this paper does not address the commission's work in implementing those recommendations.

The independent review and Victorian Government's response

Our terms of reference also require us to have regard to the findings from the independent review and the Victorian Government's published response to the review. This section provides a summary of how the findings of the independent review and government response relate to this advice, with further detail on how we have had regard to these findings in Chapter 3.

In November 2016, the Victorian Government announced the independent review, following a number of public reports suggesting Victorians were paying too much for energy.²⁸

In August 2017, the independent review released its final report and concluded the market was not working for consumers.²⁹ The cost of competition, the structure of the market and the practices of the industry were highlighted as key issues.³⁰

The independent review made 29 recommendations aimed at improving energy market outcomes for consumers, including changing retailer marketing practices, improving market monitoring, establishing a regulated basic service offer and abolishing standing offer contracts.³¹ The government released its interim response in March 2018.

The Victorian Government released its final response to the independent review on 26 October 2018, supporting all the recommendations from the independent review. The government required

²⁸ Victorian Government, Terms of reference for Independent Review of the Electricity and Gas Retail Markets in Victoria, November 2016.

²⁹ Independent Review Panel, Independent Review of the Electricity and Gas Retail Markets in Victoria, August 2017, p. ix.

³⁰ *ibid*, p.ix

³¹ *ibid*, p.xi-xiii

electricity retailers to offer a fairer price through a regulated VDO, and noted that standing offers would be abolished.³²

Additional principles we have considered

In addition to the requirements of the terms of reference, we adopted a number of additional principles to guide our work on the VDO. These are:

- Timeliness – the approach should be implementable from 1 July 2019. This would not prevent the commission from consulting on possible refinements to the methodology or updates on the inputs after that date.
- Representative – the approach should produce results that broadly reflect costs faced by retailers efficiently operating in Victoria. This does not mean that the results would necessarily reflect the cost of an individual retailer or group of retailers.
- Transparent – the approach should be able to be understood and reproducible.
- Well accepted – the approach should rely on estimation techniques that are familiar and readily applicable, noting these techniques could be enhanced in future, subject to consultation.

During our consultation process, stakeholders generally supported these principles. But we note they were not a major focus of feedback. A number of submissions responding to our draft advice commented on the transparency of our proposed approach to wholesale costs.³³ This is addressed in Chapter 3.

³² Victorian Government, Victorian Government Final Response to the Independent Review of the Electricity and Gas Retail Markets in Victoria, October 2018 p. 5.

³³ See for example: Red and Lumo Energy, submission to the Essential Services Commission Draft advice to the Victorian Government, April 2019, p. 2, EnergyAustralia, submission to the Essential Services Commission Draft advice to the Victorian Government, April 2019, p. 5, Powershop and MEA Group, submission to the Essential Services Commission Draft advice to the Victorian Government, April 2019, p. 5.

3. Proposed approach for the Victorian Default Offer

In developing our approach we have ensured that we have met the requirements of the terms of reference. This section reflects the requirement to base the Victorian Default Offer (VDO) on the efficient costs of running a retail business, a modest allowance for customer acquisition and retention costs (CARC), and a maximum retail margin, while not making an allowance for headroom. Wherever possible we have also taken the most transparent and simple approach that best meets these requirements of the terms of reference.

3.1. Overall methodological approach

The commission staff working paper and the commission's draft advice proposed the VDO be calculated using a cost-based approach.

Most submissions to the commission staff working paper and the commission's draft advice did not refer to the proposed cost-based approach, but rather commented on the estimation of particular parts of the cost stack. The Brotherhood of St Laurence supported the cost-based approach.³⁴ Alternatively, Simply Energy considered that a top-down approach to setting the VDO based on a premium above the median of currently available market offers was more appropriate.³⁵

We consider the cost-based approach is a more transparent and replicable methodology than alternatives such as an index-based approach. Further, the cost-based approach is a well-established and accepted methodology used by other economic regulators when setting electricity prices. This includes the Australian Energy Regulator (AER) when setting network tariffs, Independent Competition and Regulatory Commission (ICRC) in the ACT, and the Independent Pricing and Regulatory Tribunal (IPART) in NSW. In the United Kingdom, the Office of Gas and Electricity Markets uses a cost-based approach to set a default tariff cap.

A cost-based approach also provides more opportunity for the commission to refine the methodology over time by addressing feedback on specific elements of the cost stack rather than needing to make substantial changes to the overall approach, as may be required with an index-based or top-down approach. A cost-based approach means the VDO considers the main

³⁴ Brotherhood of St Laurence, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 2, and Brotherhood of St Laurence, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 1.

³⁵ Simply Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p.1.

costs faced by electricity retailers, which facilitates consideration of the financial viability of the industry under section 8A(b) of the ESC Act.

Given the factors set out above, our final advice uses a cost-based approach to estimate the VDO that will apply from 1 July 2019. It is important to note that in applying a cost-based approach we are not seeking to replicate the costs of a specific firm, but to estimate the efficient costs of running a retail business. For any particular electricity retailer, the cost to deliver electricity retail services may be higher or lower than the benchmark costs set out in our advice.

The commission has included the elements in Figure 5 as part of the cost components for retailers:

- wholesale costs – including hedging costs and network losses for electricity
- network costs – which are directly taken from revenue determinations by the AER
- environmental policy costs – including national renewable energy schemes and the Victorian Energy Upgrades program
- other costs – such as retail licence fees and Australian Energy Market Operator (AEMO) fees
- retail costs – this includes both the retail operating costs and customer acquisition and retention costs
- retail margin – which is applied to all underlying costs.

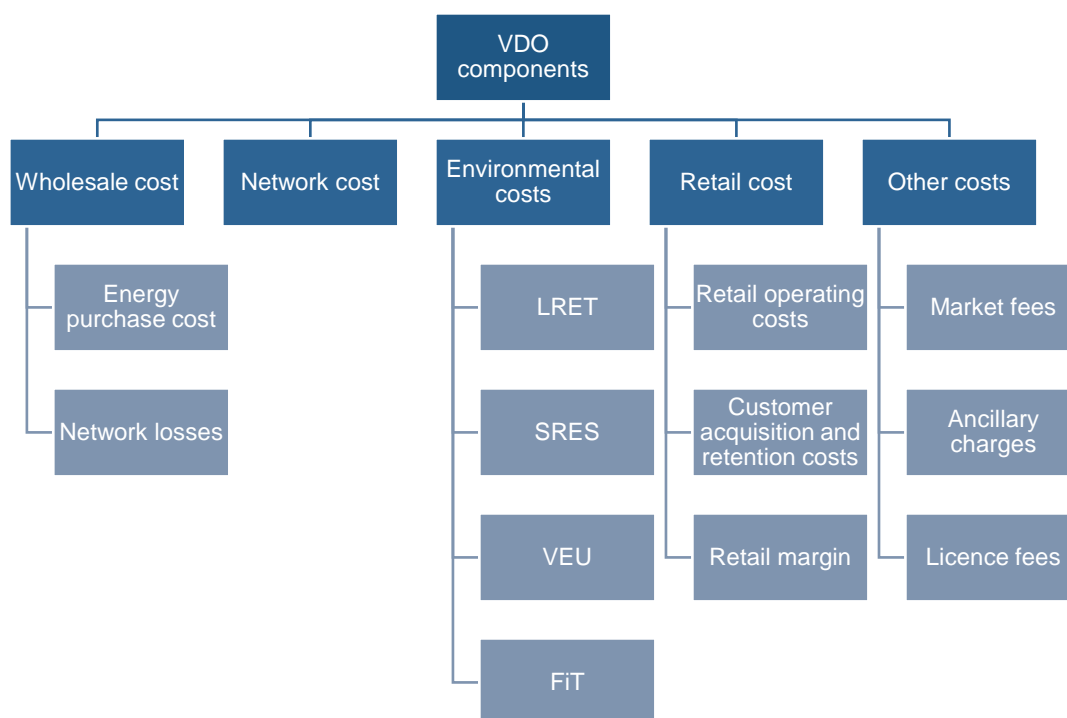


Figure 5 VDO components for retailing electricity

Where necessary, components of the cost stack are adjusted to account for inflation and goods and services tax. The cost stack is then converted into supply and usage tariffs, which is detailed in Chapter 4. The technical details of our methodology can be found in Appendix B. We recommend that the VDO initially be set for a period of six months until 31 December 2019. This will align the VDO with the timing of network tariff changes (discussed in section 3.3).

Our pricing approach to the VDO differs from the methodology proposed by the AER in its final determination for the introduction of the default market offer (DMO) in New South Wales, South Australia and south east Queensland.³⁶ The AER is responding to a request from the Commonwealth Treasurer and Minister for Energy to develop a mechanism for DMO prices.

The introduction of a DMO was a recommendation made by the Australian Consumer and Competition Commission (ACCC) in its Retail Electricity Price Inquiry (REPI) final report to reduce unjustifiably high standing offer prices for consumers who are not engaged in the market. The ACCC proposed that the DMO would be located between the median of market offer prices and median of standing offer prices. The AER has used a price-based, top-down approach for determining DMO prices.³⁷ While we note that there are some similarities between the VDO and the DMO, there are significant differences in the objectives of each pricing mechanism.

3.2. Wholesale electricity costs

Retailers purchase electricity from the wholesale market to meet the demand of their customers. In the wholesale market (which is operated by the Australian Energy Market Operator or AEMO) the supply and demand for electricity is balanced in real time. Generators offer prices for the supply of electricity, and based on how much electricity is consumed, a spot price at which the market settles is determined every half hour.³⁸

Spot prices can be highly volatile, depending on the supply and demand conditions of these half hourly intervals. Retailers, however, sell electricity to customers at a price that is usually left unchanged for a period of time. The volatility in the spot price can be managed by retailers in a variety of ways that include entering into arrangements where the wholesale price they will pay for electricity is set in advance. Often referred to as hedging, this arrangement can be achieved either by contracting directly with a generator, by owning generation assets, or through the derivative futures market (i.e. Australian Stock Exchange (ASX) Energy).

³⁶ AER, Final Determination: Default Market Offer Prices 2019-20, April 2019.

³⁷ AER, Final Determination: Default Market Offer Prices 2019-20, April 2019, pp. 7-8.

³⁸ In November 2017, the Australian Energy Market Commission determined the national electricity market would move to a five minute settlement period from 1 July 2021.

The commission staff working paper released in December 2018 proposed the use of a futures market approach to estimating wholesale electricity costs. The benefit of the futures market approach is that it provides a transparent option, and also represents an approach a retailer could take to minimising wholesale costs and managing financial risks through hedging.³⁹

The staff paper highlighted a number of input assumptions required when using the futures market method and presented possible information sources for those assumptions. Stakeholders were given the opportunity to comment on the overall approach taken to estimating wholesale electricity costs and the information sources used in the futures market approach.

Stakeholder feedback to the staff working paper

A number of submissions responding to the staff paper addressed issues relating to the estimation of wholesale electricity costs. There was broad support for using the futures market approach, particularly in a way that reflected the manner in which retailers manage their wholesale electricity purchases for their customer base.⁴⁰ Various comments and positions were raised in relation to the specific input assumptions used in the futures market approach to generate wholesale electricity costs. Particular areas of commentary included consumption load data, the period over which futures contracts are purchased, allowances for volatility and other costs.

Consumption load data

The staff paper suggested the use of AEMO's Manually Read Interval Meter (MRIM) data as it benefitted from being publicly available across each distribution zone and is likely to represent the average load for which a retailer has to provide wholesale electricity. Some retailers questioned using MRIM data in its publicly available form because it includes customers with consumption up to 160 megawatt hours (MWh) per year, which may not be representative of customers to whom the VDO is available (less than 40 MWh per year).⁴¹ These submissions also suggested that the consumption profile differed significantly between residential and small business customers, which may not be reflected in the MRIM data. Sumo made the following statement:

³⁹ Essential Services Commission, Staff working paper: Victorian Default Offer for domestic and small business electricity customers, December 2018, p. 8.

⁴⁰ For example, see submissions to the staff working paper from AGL, Alinta Energy, EnergyAustralia, Onsite Energy Solutions and Origin Energy.

⁴¹ Powershop and MEA Group, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 3; Onsite Energy Solutions, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 3; and Sumo, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p. 2.

“A retailer that has a customer base dominated by residential customers – like Sumo does – will have a different load shape to the market on average, and would be expected to have a higher wholesale electricity cost as a result.”⁴²

In contrast, Alinta Energy, AGL and EnergyAustralia all supported the use of the most recently available MRIM data as a reasonable source to estimate the consumption profile shape. There were different views about which year of historical MRIM data would best represent future load profiles. AGL and EnergyAustralia suggested that the most recent year of available data would incorporate changing load profiles due to the increased penetration of solar. Origin Energy, however, proposed using as much relevant data as possible, to highlight the variability in the load that retailers may need to cover.⁴³ This was supported by Alinta Energy, which highlighted that using a single year of data may lead to changes on a year-to-year basis.⁴⁴

Futures contract purchasing profile

Retailers provided feedback indicating that the purchase of hedging products does not occur over a short period, but generally over a 1-2 year period. Large retailers (e.g. Origin Energy, AGL and EnergyAustralia) proposed using up to two years of futures market data to generate our estimates of retailers' wholesale costs, while a number of medium-sized retailers (e.g. Powershop and MEA Group, Alinta Energy and Sumo) proposed using approximately one year of data. EnergyAustralia supported using a volume or trade weighted average of futures prices, rather than a time-weighted approach.⁴⁵

Volatility

Powershop and MEA Group stated that the level of volatility in customer load for an individual retailer is likely to be peakier and more costly to cover than provided for by the MRIM data. The changing mix of generation and behind the meter resources were also highlighted as contributors to increasing volatility in prices and load in the future.⁴⁶ Sumo also stated that it did not believe the

⁴² Sumo, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p. 2.

⁴³ Origin Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p. 4.

⁴⁴ Alinta Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 6.

⁴⁵ EnergyAustralia, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 8.

⁴⁶ Powershop and MEA Group, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 2.

proposed volatility allowance (discussed further below) was sufficient to meet their credit support costs.⁴⁷

Other comments

Sumo and AGL questioned the assumption that futures contracts traded at a five per cent premium to the expected actual pool prices. A number of stakeholders raised a range of additional costs incurred while operating in the market that the staff paper may not have taken into account.⁴⁸ This included the cost of the Reliability and Emergency Reserve Trader (RERT) scheme, the cost of meeting AEMO and ASX prudential requirements, brokerage fees, and the possible increased costs associated with five-minute settlement.

Our draft proposal for estimating wholesale electricity costs

Our draft advice proposed the futures market method to best achieve the requirement of the terms of reference, reflecting the efficient cost to run a retail business in the most transparent way. The approach considers the costs an energy retailer would face in minimising wholesale costs and managing financial risks through hedging, via products traded on the ASXEnergy futures market. We also noted that the futures market approach has been used in a number of other Australian jurisdictions in electricity retail price regulation.⁴⁹

Our draft advice also noted that adopting the futures market approach for the VDO is relatively consistent with the approach we take to setting the minimum feed-in tariff. There are, however, a number of differences between how the approach is applied in the two contexts, which reflect the different objectives of the VDO and the minimum feed-in tariff.

While the VDO is calculated based on the efficient costs to run a retail business, the minimum feed-in tariff is calculated based on the expected level of wholesale prices at the times when renewable electricity is exported to the grid. As the customer load and small-scale renewable energy export profiles are very different, this will necessarily result in different outcomes. Moreover, the minimum feed-in tariff is based on a 40 day average because this is the market's current expectation of what prices will be in the future. This differs from the VDO, which is intended to reflect the costs retailers face in supplying electricity to their customers and involves purchasing hedge products over a longer period.

⁴⁷ Sumo, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p. 4.

⁴⁸ For example, see submissions from St Vincent de Paul Society, Powershop and MEA Group, Alinta Energy and EnergyAustralia.

⁴⁹ IPART, Review of regulated retail prices and charges for electricity from 1 July 2013 to 30 June 2016: Final Report, June 2013; and ICRC, Issues Paper: Electricity model and methodology review 2018-19, 2018.

Our draft advice proposed an approach for estimating the period and profile over which forward contracts are purchased, and the forecast demand or load profile retailers would need to serve, as set out in the following sections. We engaged Frontier Economics to assist us in estimating wholesale electricity costs.

Customer load and wholesale spot price data

Our draft advice used half-hourly load data sourced from AEMO's MRIM data for each of the five distribution network areas in Victoria. The MRIM data records consumption for customers with an annual consumption of less than 160 MWh. This data was combined with historical spot price data available from AEMO for the Victorian regional reference price node in order to determine the relationship between load profile and spot prices.

At the time of delivering the draft advice, the latest load data available to Frontier Economics was up to 30 June 2017. Based on its analysis of load factors, the load premium, average daily load profiles and the average profile of spot prices, Frontier Economics advised that the five years from 1 July 2012 to 30 June 2017 was reasonable for forecasting load and price expectations for 2019-20.⁵⁰

To address feedback from some stakeholders that a single year of MRIM data may not fully reflect the level of volatility faced by a retailer, Frontier Economics conducted a Monte Carlo simulation using the five years of data. The simulation reduces the impact of data that is unique to any one particular year and can also provide insight into the expected distribution of wholesale electricity costs. The Monte Carlo simulation produced 500 simulated years using the five years of data up to 30 June 2017. Based on advice from Frontier Economics, the commission took the median value from the simulation to calculate wholesale electricity costs.

Our draft advice used MRIM data to estimate wholesale costs for each distribution zone, but it was not possible to estimate wholesale costs separately for residential and small business customers.

Futures purchasing time period and profile

To determine the level of future prices, our draft advice used contract prices published by ASXEnergy for each quarter from 1 July 2019 to 30 June 2020. Our draft advice highlighted that while the first VDO is proposed to apply until 31 December 2019, we did not believe it was reasonable to estimate wholesale purchase costs only for this six-month period, because this would understate the cost for a retailer to serve customers.

⁵⁰ Frontier Economics, Wholesale Electricity Costs – a report for the Essential Services Commission, February 2019, p. 12.

Frontier Economics advised that ASXEnergy contract prices for base and peak swaps, and base \$300 caps are likely to reflect the market's view about the average spot price in the future. Submissions to the staff working paper supported the use of these contract prices, but highlighted the significance of which contract prices are chosen suggesting that a 12 or 24 month average was most appropriate. We proposed a 12 month time weighted average in our draft advice. We noted that using a 12 month average period does not systematically result in a higher or lower estimate of wholesale costs than using a 24 month average period. Our draft advice signalled our intent to continue monitoring the suitability of this assumption.

Contract position

Our draft advice used Frontier Economics' *STRIKE* model to calculate a set of efficient contracting options that produces the lowest energy purchase cost for a given level of risk. This involves estimating the mix of hedging products that retailers would purchase and how much this would cost. Our draft advice assumed that retailers adopt a minimal risk position when contracting, noting that this broadly aligns with the reasons we believe that customers would seek to enter a VDO contract with their energy retailer. That is, customers may enter a VDO contract if they are interested in price stability (unlike market contracts which retailers can vary at any time).

In general, the contract position calculated by Frontier Economics involved:

- purchasing swaps to cover (approximately) average demand
- purchasing caps to cover (approximately) peak demand
- incurring a small amount of pool exposure at absolute peak demand times.

While the contract position chosen minimised risk, this does not necessarily mean that all risk is removed for a retailer because this is likely to incur additional costs associated with being over-contracted. To address the small risk associated with an unpredictable, very high-priced event, Frontier Economics recommended including a volatility allowance (discussed below) to account for the residual risk not accounted for in the contract position.

Volatility allowance

Our draft advice also included an allowance for holding some working capital (cash) to fund spot market purchases. The cost of holding this working capital is known as a volatility allowance.

Frontier Economics estimated that the amount of working capital required to fund cash flow shortfalls is likely to be 3.5 times the standard deviation of wholesale costs. This allowance is estimated to provide sufficient working capital to cover the energy costs associated with a very rare run of high spot prices in a year.

Stakeholder feedback on our draft proposal for wholesale electricity costs

The commission received a number of submissions to our draft advice that specifically addressed the estimation of wholesale electricity costs.

Submissions from AGL and Momentum Energy suggested that the approach proposed in our draft advice represented a reasonable approach for estimating the VDO. For example, Momentum Energy stated that:

“While noting that there will always be risk attached to any forecasting of wholesale energy prices, Momentum is generally satisfied with the ESC’s approach to wholesale inputs.”⁵¹

However, a number of other retailers questioned whether the estimation of wholesale electricity costs in the draft advice accurately represented the costs they face in serving their customers. Particular issues raised included the underlying data used to model costs, the approach to purchasing electricity futures contracts, the transparency of modelling and additional costs borne by retailers in managing their risk.

Underlying consumption load and price data

As the commission did not have the opportunity to incorporate new consumption profile data in the draft advice, many submissions reiterated feedback made to the staff working paper. A consistent comment was the need to separately estimate the wholesale electricity costs for domestic and small business customers because their different load profiles result in a material difference in cost to a retailer (e.g. as residential electricity consumption is ‘peakier’, generally the costs of hedging are higher than for small businesses). In addition, submissions also highlighted the need to exclude small business customers with demand above 40 MWh per annum. For example, Powershop and MEA Group stated that:

“...MRIM data used is inclusive of larger business customer loads (up to 160MWh usage) which are not subject to the VDO (less than 40 MWh usage). These business customers have a significantly ‘flatter’ profile than residential customers – retailers without a proportional business portfolio would likely be disadvantaged by this.”⁵²

The commission has sought to incorporate these comments as best as possible with updated data in our final advice (discussed below).

⁵¹ Momentum Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 2.

⁵² Powershop and MEA Group, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 4.

A number of submissions to our draft advice raised the need for the commission to include the latest available data, specifically price data from the first quarter of 2019. amaysim noted that:

“Although arguably a one-in-five-year occurrence, retailers have to consider this potential outcome when pricing every year and the Q119 outcome will most closely reflect the risk and cost analysis for 2019-20.”⁵³

While our final advice incorporates some newer data that covers the period following the closure of Hazelwood, we are cautious about giving too much weight to data from a specific year or quarter. Frontier Economics also note that “to the extent that the market expects the high price events in Q1 2019 are expected to be repeated in Q1 2020 this will be reflected in ASXEnergy contract prices for Q1 2020”.⁵⁴

The commission also notes that submissions to the staff working paper provided mixed views about whether only the most recent data or a longer historical series should be included in our estimation of wholesale electricity costs. As highlighted by amaysim, this level of volatility is not expected to occur every year. Therefore, to include an allowance for these costs in the VDO every year would appear to pass on higher costs to consumers that are unlikely to eventuate. AEMO’s 2018 Electricity Statement of Opportunities appears to confirm that this level of volatility is not expected every year. AEMO found that while tight supply and demand conditions were expected in the 2018-19 summer this was likely to ease in 2019-20 and 2020-21.⁵⁵

Electricity futures contract purchasing period

Our draft advice proposed taking a 12 month average contracting profile, representing a reasonable approach based on feedback from stakeholders to the staff working paper. We also noted that the 40 day, 12 month or 24 month averages do not systematically result in higher or lower estimates of wholesale electricity costs, when compared to each other over the long run.

Some submissions seemed satisfied with this approach. For example, Red and Lumo Energy stated that:

“The Commission using a 12 month average of forward contract prices, rather than 40 days, as was flagged earlier in the review helps achieve the balance in its determination for

⁵³ amaysim, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 19. The commission notes that this same quote is found in the submission from Flukes Value Management p. 4.

⁵⁴ Frontier Economics, Wholesale Electricity Costs – a report for the Essential Services Commission, April 2019, p. 12.

⁵⁵ AEMO, Electricity Statement of Opportunities 2018, p. 74.

consumers. As it is aligned with actual retailer practice, it is a more pragmatic approach to estimating efficient wholesale costs.”⁵⁶

However, a number of submissions suggested that this approach is unsuitable because it cannot be replicated in the future by a retailer (i.e. if a retailer has not already purchased futures contracts it cannot go back in time and achieve the costs proposed in our draft advice). For this reason, 1st Energy suggested that wholesale costs should be based on the 40 day average.⁵⁷

Some submissions proposed that the 12 month average of futures contracts prices should be based on a trade-weighted average rather than time-weighted as was used in our draft advice. Consistent with EnergyAustralia’s feedback to the staff working paper, AGL stated that:

“To estimate the most representative contract price, it is more realistic to calculate a trade or volume-weighted contract price over the selected time period...so AGL supports the use of a trade-weighted approach over the 12 month period for estimating contract prices.”⁵⁸

In addition to this, Sumo raised that while it supports the use of a 12 month average for contract prices, it notes that the draft advice appears to expect a retailer would have purchased futures contracts for all quarters in the regulatory period in advance. Sumo questioned whether this is reasonable, particularly for the quarters that are further in the future.⁵⁹

Finally, Origin Energy questioned whether it was reasonable to assume that base swap prices represented the market’s view of what average prices will be in 2019-20. Origin Energy highlighted that the impact of high evening peak prices may mean this is not fully incorporated.⁶⁰

Transparency of modelling

As highlighted earlier, a number of submissions to our draft advice stated that there was not sufficient transparency in our approach to estimating wholesale electricity costs to enable them fully assess the results.⁶¹ These comments were raised with respect to the use of a Monte Carlo simulation and the contract optimisation model (*STRIKE*) used by Frontier Economics.

⁵⁶ Red and Lumo Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 2.

⁵⁷ 1st Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 2. The commission also note that Fluke’s Value Management makes a similar point on page 2 of their submission.

⁵⁸ AGL, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 2.

⁵⁹ Sumo, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 6.

⁶⁰ Origin Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 4.

⁶¹ For example, see submissions from Red and Lumo Energy (p. 2), EnergyAustralia (p. 5), Powershop and MEA Group (p. 5), amaysim (p. 9), and GloBird Energy (p. 3).

3. Proposed approach for the Victorian Default Offer

The commission has made attempts to deliver transparency by publicly releasing spreadsheets that detail the load and spot prices used in the Frontier Economics modelling, as well as the contract positions determined by the *STRIKE* model. While GloBird Energy's submission provided an alternative approach to estimating wholesale costs (discussed below), there was limited input from stakeholders that suggested what alternative contracting positions would better represent the efficient costs of running a retail business.

We note that Sumo suggested that not purchasing caps to maximum demand would expose a retailer to unacceptable risk. The commission has sought to take a benchmark approach that incorporates a minimal risk position. However, the actual approach to risk is a business decision for each particular retailer and the commission is not making a comment on what may or may not be acceptable commercial practice. We also note Frontier Economics' advice that signing more contracts is not a costless exercise and may not minimise the costs for a retailer to purchase wholesale electricity.⁶²

A submission from GloBird Energy proposed an alternative to estimating wholesale costs.⁶³ At a high level, the proposed approach incorporates an energy hedging cost for average demand, a capacity hedging cost for maximum demand, load shaping variance costs where actual load differs from hedged load, and the inclusion of funding and trading costs (e.g. AEMO and ASXEnergy prudential requirements).

The commission notes that there are similarities between the GloBird Energy approach and that taken by Frontier Economics, particularly with respect to purchasing base swaps for average load and caps for peak demand.⁶⁴ The commission also notes that Frontier Economics' approach includes calculations of settlement payments and difference payments, which appear to account for what GloBird Energy refers to as the load shape variance cost. The spreadsheet models published on our website detail the variation payments that occur when actual load differs from hedged contracts. The main point of difference appears to be the inclusion of other funding costs (e.g. AEMO and ASXEnergy prudential requirements).

Given the high level of similarities between the two models, the commission explored the sources of the different results generated by each model. The GloBird Energy proposal appears to double count costs in relation to the estimation of over-contracting load shaping variance costs. In

⁶² Frontier Economics, Wholesale Electricity Costs – a report for the Essential Services Commission, April 2019, p. 40.

⁶³ A number of other submissions also recommended the commission further investigate the proposed model.

⁶⁴ GloBird Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 4.

particular, it appears to include the cost of purchasing base swaps up to average load even though these should already have been included in the energy hedging cost component of the model.⁶⁵

Our overall impression of the GloBird Energy model is that it assumes a retailer will (almost) eliminate all risk they face in hedging wholesale electricity purchases. We note that taking the approach described by the GloBird Energy model is not a costless exercise.⁶⁶ In this case it appears that the costs of removing most risks are then borne by consumers in the form of a higher cost allowance under the VDO. The commission does not believe that passing on costs in the manner proposed by the GloBird Energy approach is in the long term interests of consumers, as it could be assumed that consumers are simply required to absorb any actions taken by a retailer to reduce their risk to a negligible level (in the form of a higher price under the VDO). For these reasons we do not propose to use the GloBird Energy approach in our final advice.

The funding and trading costs associated with purchasing wholesale electricity were also raised by a number of other submissions.⁶⁷ This topic is addressed in more detail in our section on retail operating costs. We have taken this approach based on advice from Frontier Economics who highlighted that this is consistent with the approach taken by IPART and the Queensland Competition Authority (QCA) prior to 2016.⁶⁸

Our recommended approach to estimating wholesale electricity costs

We have used the futures market method to estimate wholesale electricity costs. We have had regard to the feedback and made a number of changes to the approach taken in our draft advice.

As outlined in our draft advice the commission engaged Frontier Economics to provide an estimate of wholesale electricity costs for the VDO to apply from 1 July 2019.⁶⁹ Wherever possible we have sought to use publicly available data to increase the transparency in our estimation of the VDO. Where this has not been possible (e.g. due to confidentiality concerns with more refined AEMO data) we have sought to provide further information to stakeholders in the form of spreadsheets that help understand how we have come to our recommendation.

Stakeholder feedback regarding the transparency of our approach, with respect to it being reproducible, appears to have interpreted this to mean that the exact estimate can be predicted. The commission instead believes that the combination of formulae in Appendix B and other

⁶⁵ GloBird Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 5-6.

⁶⁶ Frontier Economics, Wholesale Electricity Costs – a report for the Essential Services Commission, April 2019, p. 40.

⁶⁷ Sumo, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 7.

⁶⁸ Frontier Economics, Wholesale Electricity Costs – a report for the Essential Services Commission, April 2019, p.47-48.

⁶⁹ A copy of this report is available on our website www.esc.vic.gov.au.

publicly released spreadsheets mean that a stakeholder could reproduce our calculations to see how we have arrived at our estimate.

As highlighted in our draft advice, the futures market approach requires inputs for:

- The likely half-hourly load of the retailer's customers.
- The corresponding likely half-hourly spot prices the retailer will face.
- The cost of financial hedging contracts that retailers will face.
- The hedging position a prudent retailer is likely to adopt.

The following sections describe our approach to addressing these inputs and any changes we have made between our draft and final advice.

Consumption load data

In our draft advice, we noted that we were exploring whether data was available from either distribution businesses or AEMO that could better align the load profile used in our advice with VDO customers. The commission appreciates the efforts by both distribution businesses and AEMO in providing us with data.

The estimation of wholesale electricity costs in our final advice is based on the data provided by AEMO given the consistent data structure across all distribution zones. This consumption load data takes the original aggregated MRIM data provided for each of the Victorian distribution zones, and then filters and splits the data by domestic and small business customers with consumption less than 40 MWh per year. This addresses feedback raised by a number of stakeholders.

There are limitations on the availability of this data over a longer historical period, meaning that our final advice uses data for the period 1 July 2016 to 30 June 2018. We note that while this removes some earlier periods of data, it does include a more recent year of data that was unavailable in the MRIM data used in our draft advice. This partly addresses the feedback provided by stakeholders that our analysis should include more recent load and price data. Frontier Economics also note that “the benefit of having more recent data, and load data that better matches the customers to which the VDO will apply, clearly suggests the more recent data from AEMO is preferable.”⁷⁰

This consumption load data was combined with historical spot price data available from AEMO for the Victorian regional reference price node in order to determine the relationship between load profile and spot prices. Similarly to our draft advice, Frontier Economics has analysed consumption and price data, load factors, and load premiums, and advised that the data made available by AEMO for the period 1 July 2016 to 30 June 2018 provides reasonable data for forecasting load

⁷⁰ Frontier Economics, Wholesale Electricity Costs – a report for the Essential Services Commission, April 2019, p. 9.

and price expectations for 2019-20.⁷¹ To minimise the impact of any particular year, the commission has taken the median year from the Monte Carlo simulation conducted by Frontier Economics. Consistent with the analysis conducted for the draft advice, the Monte Carlo simulation generates 500 simulated years using the two years of data available. We have no reason to believe, and none has been suggested in submissions, that these Monte Carlo simulations would be biased in any particular direction. On that basis, we have concluded that the median simulation represents a reasonable and unbiased benchmark load profile.

As with our draft advice we are publishing spreadsheets that detail the load and price profiles that are produced for the median simulated year from the Monte Carlo simulation. We believe that these spreadsheets, along with the description provided by Frontier Economics, provide transparency to stakeholders about the data used to arrive at our estimate of wholesale electricity costs.

Futures purchasing time period and profile

Consistent with our draft advice, we believe it is appropriate to calculate the level of future prices based on contract prices for each quarter from 1 July 2019 to 30 June 2020. We note the feedback from some stakeholders suggested our estimate should be based on futures contracts from 1 January 2019 to 31 December 2019 to match with the practice of some retailers to price on a calendar year basis. In developing our final advice we have had consideration to the terms of reference requiring our advice on a price that applies from 1 July 2019 and that retailers have the opportunity to change their prices to reflect future costs. The commission does not believe it would be efficient to base our advice on these historical costs when there is data available that provides an indication of the market's expectation of future prices.

The commission also remains unconvinced by statements from some retailers that this change is needed due to higher costs faced in the first quarter of 2019. If a consistent approach was taken to calculating futures contracts prices (i.e. taking a 12 month average at a point in December 2018), it is not self-evident that the cost of Q1 2019 prices would be higher than the current estimate of Q1 2020.

Our final advice also recommends that contract prices for each quarter from 1 July 2019 to 30 June 2020 should be based on a 12 month trade-weighted average. This addresses feedback from stakeholders that the average should be based on the prices actually paid by retailers, rather than a simple average of the daily price. We note that a small number of stakeholders appeared to propose that we should use a 40 day average to calculating contract prices. The commission believes that a 12 month trade-weighted average provides a reasonable benchmark amongst the

⁷¹ *Ibid.*

range of approaches that could be taken by retailers, and also provides greater stability in prices than a 40 day average. We also note that the proposal to use a 40 day average is inconsistent with feedback we have previously received from stakeholders.

Contract position

Our final advice continues to use analysis conducted by Frontier Economics using their *STRIKE* model, which calculates a set of efficient contracting options based on the lowest energy purchase cost for a given level of risk. We continue to estimate wholesale electricity costs based on a minimal risk strategy.

In coming to our final recommendation we have considered the range of feedback provided by stakeholders relating to the transparency of the modelling and alternative approaches to estimating how a retailer would purchase futures contracts.

We recognise that the specific calculations conducted by the *STRIKE* model are not available to stakeholders. However, we publicly released spreadsheets detailing the contract positions estimated by the model and were open to stakeholders commenting on whether the results were reasonable given the load and price data.

For our final advice, Frontier Economics has also compared the *STRIKE* outputs with the contract positions used by the QCA, which is based on a simpler approach that takes the same approach to hedging despite differences in load profiles. While the commission is not commenting on the relative merits of the QCA's approach, we note that the estimates used in our final advice result in similar contract positions. As highlighted by Frontier Economics, the *STRIKE* model accounts for different approaches a retailer may take to hedging for different consumption load profiles between customer types and distribution zones.⁷² The commission notes that a number of retailers suggested the results were reasonable and most did not raise objections to the contract position proposed in the draft advice. While we have also considered that a number of retailers supported the alternative approach proposed by GloBird, and comments from Sumo about an acceptable hedging approach, based on this feedback we believe that the results delivered by Frontier Economics represent a reasonable estimate of the wholesale electricity costs faced by a retailer.

In response to stakeholder comments on our draft advice, we have taken steps to improve the transparency of our analysis by publishing spreadsheets highlighting the contracting positions and also comparing the results with other approaches. In the future we will continue to work with stakeholders about how we can support transparency.

⁷² Frontier Economics, Wholesale Electricity Costs – a report for the Essential Services Commission, April 2019, p. 43.

Volatility allowance

Our final advice takes an approach that is consistent with the draft advice. The actual allowance has changed because we have now calculated volatility allowances separately for residential and small business customers. As noted above, we did consider the feedback provided by stakeholders that suggested our estimate of wholesale electricity costs should include allowances for financial and other prudential costs. This issue is discussed in section 3.5 as part of our allowance for retail operating costs.

Recommended approach to estimating wholesale costs

The commission recommends using a futures market approach based on the following inputs:

- AEMO MRIM data for the period 1 July 2016 to 30 June 2018. Data is split between domestic and small business customers with consumption less than 40 MWh per annum.
- NEM (Victoria) spot price data for the period 1 July 2016 to 30 June 2018.
- Taking the median from a Monte Carlo simulation producing 500 simulated forecasts of the year 2019-20 using the data above.
- ASXEnergy contract prices for base and peak swaps, and \$300 caps for the 12 months up to 5 April 2019. Contract prices are the 12 month trade-weighted average.
- Minimised risk contract position, purchasing swaps to cover average demand and caps to cover peak demand and incurring a small amount of pool exposure.
- Including a volatility allowance to reflect the cost of holding working capital to cover the small amount of pool exposure.

Network losses

When electricity is transported through the transmission and distribution networks, some of it is lost in the process. Electrical losses occur in both the transmission and distribution networks because of electrical resistance in the wires which converts some electricity to heat. These losses must be factored into any electricity purchased through the wholesale market to ensure that supply meets demand. As a result, more electricity is generated than is consumed by end users.

Our draft advice proposed using the latest available data published by AEMO on average distribution loss factors (DLF) and marginal loss factors (MLF). There were a small number of submissions that provided feedback on our approach to network losses. EnergyAustralia noted that using AEMO's data led to lower loss factors in the AusNet Services region when compared with

CitiPower⁷³, while amaysim noted that it understood that some customers were on long sub-transmission lines.⁷⁴ In the absence of more data on which to base any changes, for our final advice we have adopted an approach consistent with our draft advice.

Therefore, our final advice uses the latest AEMO data on average DLFs.⁷⁵ The commission notes that our draft advice was based on DLFs for 2018-19, but these have been replaced in our final advice by the 2019-20 DLFs that were published by AEMO on 29 March 2019. We have used the residential DLF that applies to most residential customers in a given network.⁷⁶

AEMO also publishes marginal loss factors.⁷⁷ Marginal loss factors represent the increase (or decrease) in loss that would occur in response to an incremental change in generation output or load demand from its current value.⁷⁸ The commission again notes that our draft advice used the 2018-19 MLFs as this was the latest available at that time. However, AEMO published an updated draft for MLFs on 1 April 2019. Our final advice uses these MLFs to calculate average loss factors for the transmission network for each distribution zone based on the location of each relevant node.

Multiplying these loss factors together gives the combined loss factor for each network. This number represents the required generation for customers to consume 1 unit of electricity.⁷⁹

This total loss factor is then multiplied by the customer volume to calculate the cost of the additional amount of wholesale electricity a retailer needs to purchase to service that customer.

Recommended approach to network losses

- Use data available from the AEMO for distribution loss factors and marginal loss factors.

⁷³ EnergyAustralia, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 8-9

⁷⁴ amaysim, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 10.

⁷⁵ Australian Energy Market Operator, *Distribution Loss Factors for the 2019-20 Financial Year*, p. 13.

⁷⁶ The relevant loss factor is the type E factor (low voltage market customers) for each distributor's short sub-transmission lines.

⁷⁷ Australian Energy Market Operator, *Regions List and Draft Marginal Loss Factors: FY 2019-20*, April 2019.

⁷⁸ Australian Energy Market Operator, *Treatment of Loss Factors in the National Electricity Market*, July 2012, p. 7.

⁷⁹ Note that transmission loss factors can be seen as 'true ups' from the distribution loss factor and can therefore be negative.

3. Proposed approach for the Victorian Default Offer

3.3. Network costs

Network costs represent the costs of building, operating and expanding the electricity distribution and transmission networks. There are five electricity distribution zones across Victoria (see Figure 6). Each of these zones has separate characteristics which determine their respective tariffs.

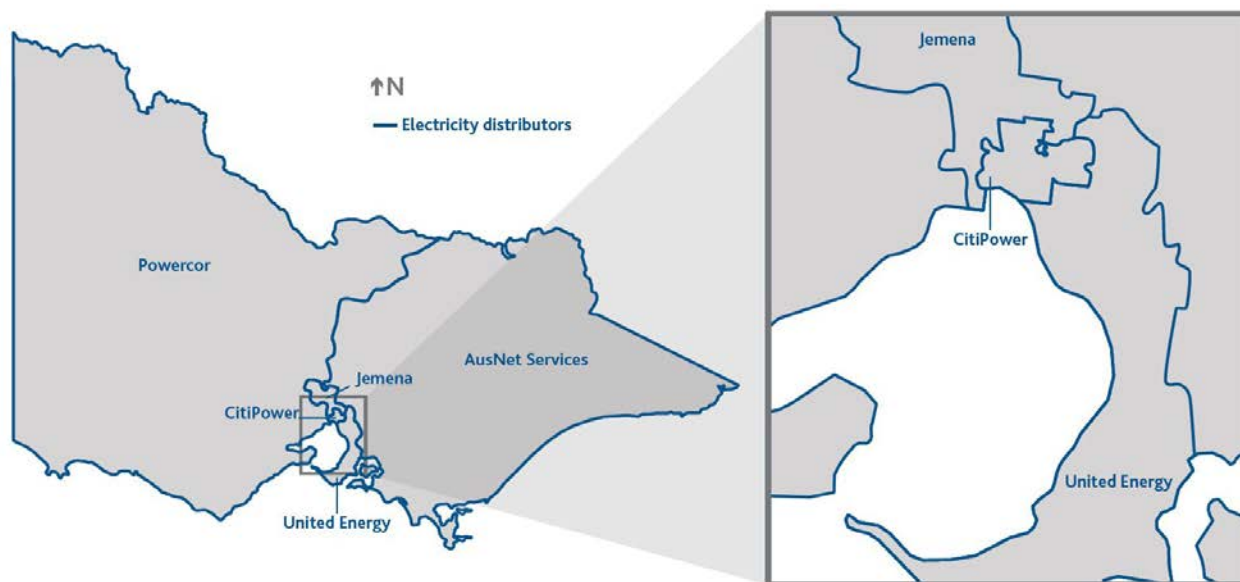


Figure 6 Map of Victorian electricity distribution zones

For all residential and small business electricity customers, there are three main elements associated with each tariff:

- Distribution charges – tariffs for the use of the distribution network
- Transmission charges – tariffs for the use of the transmission network
- Jurisdictional charges – tariffs for the payments distributors are required to make to customers as part of the Victorian Premium Feed-in Tariff.⁸⁰

These charges vary between the distribution businesses as each network has its own specific requirements in terms of maintenance, expansion and cost allocation.

The five electricity distribution businesses in Victoria were required to install Advanced Metering Infrastructure (AMI, i.e. smart meters) to small customers in their networks. To recover the cost of the AMI rollout, the Australian Energy Regulator (AER) approves a regulated charge for AMI on a per customer basis.

⁸⁰ See for example, AusNet Services, *Electricity distribution – Annual tariff proposal 2018*, November 2017, p. 54.

Stakeholder feedback to the staff working paper on estimating network costs

The commission staff working paper proposed to treat network and AMI costs as a pass-through to customers. We noted that network tariffs for residential and small business customers differ, requiring the VDO to be set separately for each customer type – suggesting two VDOs for each distribution zone, or ten in total.

Generally, stakeholders supported the approach taken in the staff paper to use a cost pass-through to determine network costs. A number of retailers supported the initial VDO applying for six months, noting the AER's annual network tariff changes commence on 1 January 2020.⁸¹

Draft proposal for estimating network costs

Given the broad endorsement of the pass-through approach recommended in the staff working paper, the commission's draft advice recommended network costs be calculated on this basis. Further, we proposed to use the single rate tariffs for residential and small business customers in each distribution zone, with the exception of United Energy and AusNet Services' zones.⁸² We noted these single rate tariffs were the most commonly used network charges, and their flat structure supported the objective for the VDO to be simple and transparent.

We recommended the initial VDO to apply for only 6 months from 1 July 2019, aligning the VDO with changes in network charges that occur on a calendar year basis.

Noting our terms of reference state the VDO will provide a simple trusted and reasonably priced option for consumers unwilling or unable to engage in the retail electricity market, we acknowledged that retailers may currently supply standing offer customers who are not on an underlying single rate network tariff (such as a time of use).

We also proposed the inclusion of a controlled load (dedicated circuit) network tariff for residential customers.

Stakeholder feedback to our draft proposal for estimating network costs

A submission from CitiPower, Powercor and United Energy – three of Victoria's electricity distribution businesses – informed us that in 2020, United Energy intends to simplify its tariff

⁸¹ Simply Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 5.

⁸² AusNet's distribution tariff has two inclining blocks where block one is the first 1020 kWh per quarter and block two is the balance. United Energy has separate Peak (Summer) and Off peak (Non-summer) charges.

structures by removing seasonality on the 'LVS1R residential low voltage small 1 rate tariff', and the 'LVM1R low voltage medium 1 rate tariff'.⁸³

We acknowledge that introducing a seasonal two-rate network tariff for only the initial six month period of the VDO may increase complexity for consumers. Therefore, using data from the Australian Energy Market Operator (AEMO) on the annual profile of consumption by residential and small business customers in the United Energy zone, we have generated a weighted average for the six month period commencing 1 July 2019. The weighted average combines summer and non-summer rates into a single variable charge for 'LVS1R residential low voltage small 1' rate and the 'LVM1R low voltage medium 1' rate in United Energy's distribution zone.

In relation to electricity network charges, the distribution businesses noted that the 'Low voltage small rate, LVS1R' tariff and the 'Low voltage medium rate, LVM1R' tariff did not include the premium feed in tariff (PFIT) pass through charge.⁸⁴ In response, we have adjusted our final advice to reflect the inclusion of the PFIT pass through charge.

Our recommended approach to estimating network costs

Consistent with the tariff options set out in our draft advice and taking into account the feedback we received from stakeholders on estimating network costs, our recommendation is to use the distribution tariffs for residential and small business customers shown in Table 1 below. These tariffs are the single rate tariffs in each distribution zone, with the exception of AusNet Services and United Energy's zones (noting that the seasonal tariff in United Energy has been converted into a single flat tariff). As noted, we recommend that the initial VDO only apply for 6 months from 1 July 2019, aligning the VDO with changes in network charges. Further detail on how we have incorporated these costs into the VDO can be found in Tables 7 and 8 (section 4.3 – estimating the cost stack components), as well as Appendix B.

⁸³ CitiPower, Powercor and United Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 1.

⁸⁴ CitiPower, Powercor and United Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 1.

Table 1 Network tariff categories

Distributor	Residential tariff	Small Business tariff
AusNet	Small residential single rate, NEE11	Small business single rate, NEE12
CitiPower	Residential single rate, C1R	Non-residential single rate, C1G
Jemena	Single rate, A100/F100a/T100b general purpose	Small business A200/F100a/T100b
Powercor	Residential single rate, D1	Non-residential single rate, ND1
United Energy*	Low voltage small 1 rate, LVS1R	Low voltage medium 1 rate, LVM1R

*Note: United Energy seasonal tariffs are converted into a single tariff using AEMO consumption profile data.

Controlled load customers

Our approach to calculating controlled load charges for residential customers has not changed from the approach set out in our draft advice, as we received little feedback from stakeholders on the issue. We have applied the relevant controlled load tariff that corresponds to each of the residential network tariff categories, shown in Table 2.

Table 2 Controlled load network tariff categories

Distributor	Residential controlled load or dedicated circuit tariff code
AusNet	NEE13
CitiPower	CDS
Jemena	A180
Powercor	DD1
United Energy	LVDed

Advanced Metering Infrastructure (AMI) charges

We propose to directly apply the relevant 2019 AMI charges from each distribution zone to the relevant reference price for each electricity distribution zone. As proposed for other network charges, we propose to update AMI charges, as approved by the AER, on a calendar year basis. Further detail on how these charges are incorporated in the VDO can be found in Table 9 (section 4.3 – estimating the cost stack components), and Appendix B.

Recommended approach to network costs (including AMI charges)

- Directly include the simplest network use of service (NUOS) tariff in each distribution zone in the VDO – generally a daily supply charge and a flat usage charge. We have used annual consumption annual AEMO consumption data to convert United Energy’s seasonal tariffs into single rate tariffs.
- Where applicable for a particular customer, the VDO should include a controlled load or dedicated circuit option.
- Include AMI charges for each distribution zone as a cost per customer.

3.4. Environmental scheme and other regulatory costs

There are four main environmental costs faced by Victorian electricity retailers:

- Large-scale Renewable Energy Target (LRET): a Commonwealth Government scheme that encourages renewable energy generation by creating a market for renewable energy certificates.
- Small-scale Renewable Energy Scheme (SRES): a Commonwealth Government scheme that supports the installation of small-scale renewables, such as household solar rooftop panels and solar hot water systems.
- Victorian Energy Upgrades (VEU): a state-based program that places a liability on Victorian energy retailers (both electricity and gas) to surrender a specified number of Victorian Energy Efficiency Certificates each year.
- Feed in tariff (FiT): retailers credit small scale renewable energy exports with the minimum feed-in tariff that includes an allowance for the avoided social cost of carbon.

In addition to this, retailers also incur a range of other regulatory costs, such as market participant fees, ancillary service charges, the Reliability and Emergency Reserve Trader (RERT) scheme costs, and licence fees.

Stakeholder feedback to the staff paper

The commission staff working paper proposed a market-based approach to estimating environmental costs. We proposed that other regulatory costs should be based on publicly available information.

While submissions to the staff paper signalled broad support for a market-based approach to estimating environmental costs, some stakeholders raised questions about the ongoing use of this method in the future – suggesting it may become less reflective of the investments being made in renewable generation.⁸⁵

Apart from submissions raising the need to include new costs like the RERT, there was little discussion about the approach to estimating other regulatory costs.

Stakeholder feedback on our draft advice

The commission's draft advice outlined our proposed method for estimating each of the environmental schemes: LRET, SRES, VEU, and the FiT; as well as identifying the source of the publicly available information on regulatory costs: AEMO market fees, ancillary charges, RERT

⁸⁵ Origin Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 5.

costs and ESC licence fees. Similarly to the staff paper, the estimation of these charges was based on market data (for environmental costs) or publicly available information (for other costs).

We acknowledged the concerns raised in submissions relating to the ongoing use of a market-based approach in estimating environmental costs, noting the alternatives raised represented the particular circumstance of a single retailer, and did not align with our terms of reference to base the VDO on the efficient cost to run a retail business.

Our draft advice noted our intention to update the final advice once the binding liabilities used in the calculation of the LRET and SRET were published by the Clean Energy Regulator.

On the LRET, AGL (and others) noted that it did not believe taking a 40 day average of large-scale generation certificates (LGC) prices is justifiable on the grounds that it does not reflect how a prudent retailer would procure LGCs, nor is it consistent with our approach to calculating contract prices as part of our wholesale energy cost estimation.⁸⁶ Retailers suggested a 12 month average as a more appropriate period.

AGL and EnergyAustralia again expressed concern that the market for LGCs is becoming less relevant to the cost of the LRET, as LGC market prices are becoming less reflective of the investments being made in renewable generation – as retailers meet more of their obligations through power purchasing agreements.⁸⁷

Our recommended approach to estimating environmental and other regulatory costs

Large-scale renewable energy target (LRET)

To calculate the cost for retailers to comply with the LRET, the quantity of certificates a retailer must purchase and surrender is multiplied by the likely price of LGCs. The Clean Energy Regulator (CER) determines the number of LGCs that must be purchased by retailers from renewable generators by 31 March each year. This percentage is known as the renewable power percentage (RPP). We have updated our approach to reflect data on the RPP published by the CER on 12 March 2019.

We have used a market price for LGCs to determine the cost of complying with the LRET. In response to comments received from retailers on our draft advice,⁸⁸ we have determined this by taking a 12 month average of LGC prices as reported by Mercari.⁸⁹

⁸⁶ AGL, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 3.

⁸⁷ AGL, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 3; EnergyAustralia, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 6.

⁸⁸ Submissions from WINconnect, Australian Energy Council, Red and Lumo Energy, and Alinta Energy suggested a 12-month average as a more appropriate averaging period.

This liability is also multiplied by network losses to reflect that the liability calculation is based on electricity purchases from AEMO settlement point at the Victorian regional reference node.

Small-scale renewable energy scheme (SRES)

Similar to the LRET, the cost of complying with the SRES is estimated by multiplying the quantity of small-scale technology certificates (STCs) a retailer must surrender by the price a retailer is likely to pay for each certificate.

The CER determines the small-scale technology percentage (STP) for any given year by 31 March of that year. We have updated our price model to reflect data on the STP published by the CER on 12 March 2019.

Liable entities can purchase STCs on the open market or through the STC Clearing House, which are sold at a fixed price of \$40 per certificate. Frontier Economics advised that the reported spot price of STCs has historically been at, or close to, this price of \$40.

Similar to the LRET, the STP applies to electricity acquired from the AEMO settlement point at the Victorian regional reference node. As such, the STP is also subject to electricity loss factors in our calculation of the VDO.⁹⁰

Victorian Energy Upgrades (VEU)

Under the VEU program, relevant entities (energy retailers) must surrender a number of Victorian Energy Efficiency Certificates (VEECs) equal to their scheme liability. If a relevant entity fails to surrender a sufficient number of certificates for a particular calendar year, it must pay a penalty per certificate by which it falls short. It is at the discretion of the relevant entity whether it creates VEECs directly through energy saving activities, or whether it decides to purchase VEECs from accredited businesses.

A retailer's annual electricity VEEC liability is calculated by multiplying its total liable electricity acquisition (in MWh) by the greenhouse gas reduction rate for electricity. For the 2019 compliance year (1 January to 31 December 2019) the reduction rate for electricity is 0.15419.

We have relied on historic data purchased from the market monitoring service TFS Green⁹¹ and used a simple average of spot prices for the last 12 months. While this involves rolling forward the

⁸⁹ Available at: <http://lgc.mercari.com.au/>. Accessed 18 April 2019

⁹⁰ Clean Energy Regulator, Calculating certificate liability, accessed 21 February 2019, <http://www.cleanenergyregulator.gov.au/RET/Scheme-participants-and-industry/Renewable-Energy-Target-liable-entities/Calculating-certificate-liability>.

cost of VEECs from previous years, we plan to replicate this approach going forward to ensure that any changes in prices are eventually reflected in the VDO.

The VEEC liability is also subject to electricity loss factors in our calculation of the VDO.

Feed-in tariff (Victoria)

The minimum feed-in tariff (FiT) incorporates three components that represent costs a retailer *avoids* when a customer generates renewable electricity and supplies it into the network: wholesale costs, market fees, and network losses. As such, there is no need to compensate retailers for these costs in the VDO. A fourth component, the value of avoided social cost of carbon, is not an avoided cost to the retailer and therefore we assume it is recovered by retailers from the wider customer base.

We have estimated this additional cost based on the volume of rooftop renewable electricity exported to the grid, divided by the total number of small Victorian electricity customers.

There is limited data available on either actual distributed energy exports or forecasts of exports. As such, we have used historical data as the best available proxy.

We have received total renewable export data for small customers from each of the distribution businesses for 2017-18. We also collect customer number data via the Victorian Energy Market Report. The latest published data we have available on customer numbers is the average number of customers by retailer for 2017-18.⁹²

Further detail on this approach is found in Appendix B.

AEMO market fees

Market fees include charges for participating in the market, full retail contestability and the AEMO's role as the national transmission planner. Estimates and forecasts of these costs are reported in AEMO's Energy Market Budget and Fees report.⁹³ We have used the 2019-20 estimates of these relevant charges in the VDO to apply from 1 July 2019.

Ancillary charges

Ancillary services are used by AEMO to manage the power system safely, securely and reliably, with respect to standards such as frequency, voltage and system restart processes. Unlike other

⁹¹ Available at <https://tfsgreen.com.au/>

⁹² Essential Services Commission, Victorian Energy Market Report: 2017-18, February 2019.

⁹³ AEMO, Electricity functions 2018-19 AEMO Final Budget and Fees, June 2018.

AEMO charges, AEMO operates separate markets for various ancillary services. As such, the relevant charges are dependent on the amount of service required at any particular time, which means the costs will vary from period to period.

This data is regularly analysed by the Australian Energy Market Commission (AEMC) as part of its residential price trends report. We have used the AEMC's 2018 Residential Electricity Price Trends report for Victorian ancillary charges in 2019-20 in the VDO to apply from 1 July 2019.⁹⁴

Reliability and Emergency Reserve Trader costs

The Reliability and Emergency Reserve Trader (RERT) is a function conferred on AEMO to maintain power system reliability and system security using reserve contracts.

We have included the latest RERT cost data in the VDO. This means that the actual costs of the RERT are included in the VDO, rather than forecasts, which could either overstate the cost (if RERT is not required in a certain year) or understate the cost (if RERT is required on multiple occasions). However, we note that even if a retailer's customer numbers significantly change, the impact of our lagged estimate for RERT costs on the total VDO price will be small.

While our draft advice was based on RERT costs for 2017-18, we have updated this advice to include the latest RERT costs. AEMO has stated that total RERT costs in Victoria and South Australia for 24 and 25 January 2019 were \$34.2 million.⁹⁵ AEMO has estimated that these events cost on average \$3.20 for a typical residential customer.⁹⁶

Essential Services Commission licence fees

Electricity retailers are charged a fee to be licensed by the commission to sell electricity to Victorian consumers. Licence fees are based on the costs incurred by the commission in performing its regulatory functions. The specific fee for each retailer is contingent on the number of customers served by that retailer.

We have used a market wide average of all retailer licence fees in estimating the cost of a licence fee for the VDO to apply from 1 July 2019. The latest available data on licence fees is from 2017-18, we have updated these amounts for inflation.

⁹⁴ Ernst and Young, Residential Electricity Price Trends – Wholesale Market Costs Modelling 2018, December 2018, p. 31.

⁹⁵ AEMO, Load shedding in Victoria on 24 and 25 January 2019, April 2019, p. 6, http://aemo.com.au/-/media/Files/Electricity/NEM/Market_Notices_and_Events/Power_System_Incident_Reports/2019/Load-Shedding-in-VIC-on-24-and-25-January-2019.pdf

⁹⁶ *Ibid.*

Recommended approach to environmental costs

- LRET – the 2019 RPP is multiplied by the market price for LGCs.
- SRES – the 2019 STP is multiplied by the clearing house price.
- VEU – the 2019 greenhouse reduction rate for electricity is multiplied by the 12 month average price for VEECs.

The LRET, SRES and VEU costs are multiplied by network loss factors.

- FiT (social cost of carbon) – total renewable exports in 2017-18 divided by average total residential and small business customers in 2017-18, multiplied by the social cost of carbon (2.5 cents).

Recommended approach to other regulatory costs

- AEMO market fees – 2019-20 estimates taken from the latest available publication.
- Ancillary fees – 2019-20 forecast taken from the AEMC's residential price trends.
- RERT – based on the latest estimates of charges released by AEMO.
- ESC licence fees – market wide average of fees paid in 2017-18, adjusted for inflation.

3.5. Retail operating costs

This section addresses the costs incurred by retailers in conducting their business. These costs can be separated into two main sub-categories:

- Retail operating costs (also referred to as ‘costs to serve’) – a range of costs that include billing and revenue collection systems, IT systems costs, call centre costs, corporate overheads, energy trading costs, provision for bad and doubtful debts, and regulatory compliance costs.
- Customer acquisition and retention costs – could include the costs associated with acquiring new customers and retaining existing customers, or promotions and sponsorships.

The commission has not included the administrative costs of competition (e.g. the costs of ‘on-boarding’ a new customer) in our definition of customer acquisition and retention costs. We have instead included these administrative costs as part of broader retail operating costs. The terms of reference require the commission to base the VDO prices on the efficient cost to run a retail business, and include a ‘modest’ allowance for customer acquisition and retention costs (CARC), which we describe separately in section 3.6.

In this section, we focus on other costs to serve, which we term ‘retail operating costs’.

The commission has previously outlined two approaches to estimating retail operating costs:

- Bottom-up approach – based on detailed data provided by retailers that highlights each of the specific costs of operating in Victoria. This approach is likely to be most accurate, but is time and resource intensive for the commission and retailers.
- Benchmarking approach – based on publicly available aggregated data on operating costs for the retailers or a representative retailer. This data can be obtained from a variety sources, such as annual reports, previous regulatory decisions, and other reviews. This approach assumes that the benchmark data provides useful insights into the efficient costs of running a retail business as per our terms of reference.

Stakeholder feedback to the staff working paper

The staff working paper released in December 2018 proposed to adopt a benchmarking approach to estimating retail operating costs.

The recent analysis by the Australian Competition and Consumer Commission (ACCC) in its Retail Electricity Pricing Inquiry (REPI) provided some useful insights into average costs to serve and

customer acquisition and retention costs.⁹⁷ The staff working paper noted a desire to verify this with information from retailers operating in Victoria, and invited retailers to provide us with their cost information to support our analysis. However, in submissions to the staff working paper, only one retailer provided information about its actual retail operating costs.

Most stakeholders provided some support for the use of benchmarking to estimate the retail operating cost allowance, even where their preferred approach was to base the allowance on actual costs (such as via a bottom-up approach, or from publicly reported costs). For example, Onsite Energy Solutions stated:

“OES considers that a ‘bottom up’ approach to develop a retail cost stack, using actual retailer data, would be preferable to benchmarking alone. However, for setting the inaugural VDO pricing we understand that benchmarking is the only feasible approach given the short time to complete the task (~ 3 months).”⁹⁸

Submissions to the staff working paper also raised a number of points about the use of a benchmarking approach, including:

- Differences in the size and business models of retailers meant that benchmarks would not be reflective of efficient costs for retailers of different sizes. For example, Alinta Energy noted that the commission would need to be clear on which costs are included in retail operating costs, and the business model and risk profile that will apply to the definition of an efficient retailer.⁹⁹ Origin Energy noted that no other regulators currently perform robust operating cost assessments, with the last estimation now too old to be relevant.¹⁰⁰
- Jurisdictional differences meant that benchmarks from other jurisdictions would not necessarily reflect the Victorian market – although there was also some recognition that the ACCC’s figures in the REPI recognised this difference.¹⁰¹
- The Australian Energy Council noted that other regulators have tended to set their efficient benchmarks based on the costs of a new entrant retailer – and if the commission sets the VDO

⁹⁷ ACCC, Retail Electricity Pricing Inquiry – Final Report, July 2018.

⁹⁸ Onsite Energy Solutions, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 4.

⁹⁹ Alinta Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 10.

¹⁰⁰ Origin Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 6.

¹⁰¹ AGL, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 6.

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allowance based on a tier 1 retailer, the smaller retailers will be unable to recover their costs.¹⁰² A number of other stakeholders raised similar issues around the importance and implications of the definition of the benchmark efficient entity.

A number of submissions to the staff working paper also noted that it is important that the commission takes into account regulatory costs and any recent or future changes. Changes in the regulatory environment that were identified as driving changes in costs included:

- the introduction of the Payment Difficulty Framework (PDF) on 1 January 2019
- new costs associated with the RERT mechanism
- increased risks due to government intervention.

Apart from costs associated with the implementation of the Victorian PDF, submissions did not provide data about costs driven by regulation. Under our recommendation, regulatory costs are included within the general category of retail operating costs. Costs of the RERT are explicitly addressed in section 3.4.

Our draft proposal for estimating retail operating costs

Given the lack of actual cost data provided by retailers in response to our staff working paper, our draft advice on the VDO also proposed using a benchmarking approach for retail operating costs for the first VDO to apply from 1 July 2019.

Our benchmarking approach in the draft advice considered:

- the recent ACCC analysis of retail operating costs in its REPI – specifically, we considered that the work by the ACCC provides a clear reflection of the differences in retail operating costs between Victoria and other jurisdictions
- market data, both publicly available and the limited data provided to us by stakeholders in submissions to the staff working paper
- recent regulatory changes that could have an impact on costs.

The commission engaged Frontier Economics to provide advice on the benchmark allowance for retail operating costs (and customer acquisition and retention costs).

ACCC analysis of retail operating costs

In the REPI, the ACCC sought information from 18 retailers on retail operating costs over the years 2007-08, 2010-11, and 2013-14 to 2017-18. The ACCC assessed retail operating costs (referred to in the REPI as ‘cost to serve’) by considering:

¹⁰² Australian Energy Council, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 2

- differences in retail operating costs between states
- differences in retail operating costs between different types of retailers
- a breakdown of the eight largest categories of retail operating costs provided by each relevant retailer for 2016-17.

Figure 7 below sets out the ACCC’s findings on retail operating costs by state for 2016-17. As shown in the figure, retail operating costs in Victoria were found to be broadly in line with the NEM average, but up to \$11 per customer higher than the other fully contestable markets in the NEM (NSW and South Australia).

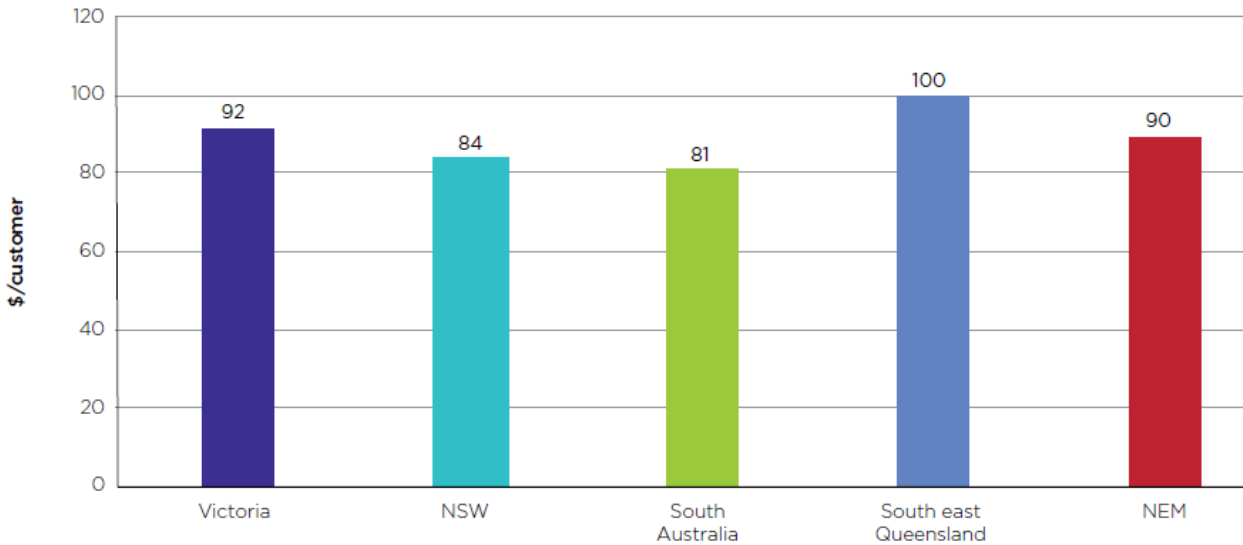


Figure 7 ACCC findings on average retail operating costs by state, 2016-17, \$ per residential customer, ex GST

Source: ACCC, Retail Electricity Pricing Inquiry – Final Report, June 2018, p. 223.

The ACCC also reviewed differences in costs between different types of retailer. As shown in Figure 8 below, the ACCC found that the difference in costs between the tier 1 (big three) retailers and other commercial retailers was significant.

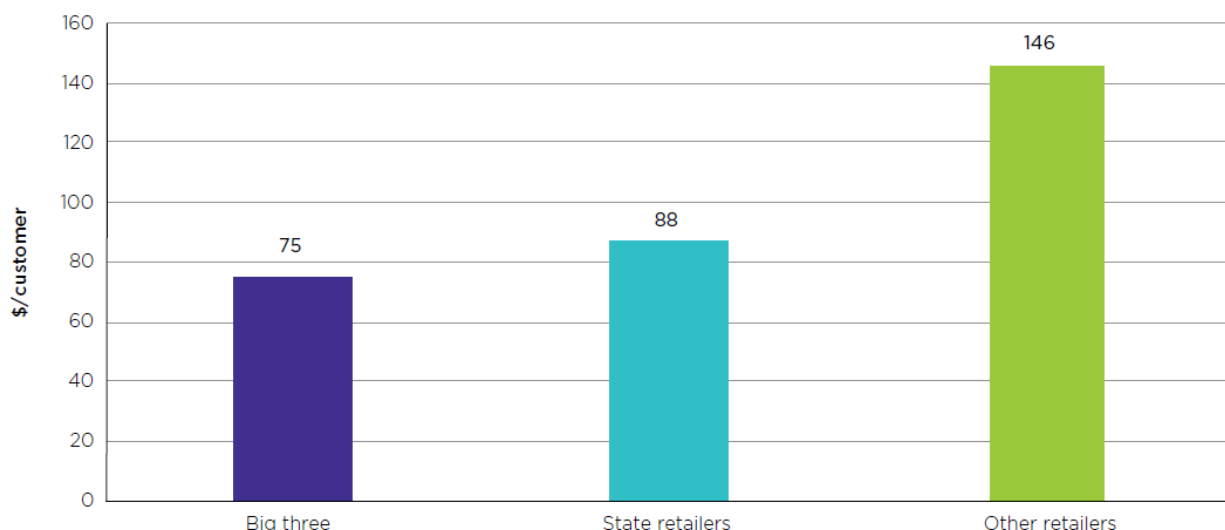


Figure 8 ACCC findings on average retail operating costs by retailer tier, 2016-17, \$ per residential customer

Source: ACCC, Retail Electricity Pricing Inquiry – Final Report, June 2018, p. 224.

The ACCC noted that large retailers are likely to be able to spread fixed costs across a larger customer base, but that this did not appear to fully explain the differences. The ACCC assessed the main drivers of retail operating costs in order to explain some of the differences between retailers, which included:

- Bad debts and debt collection – retailers provided a range of responses to the ACCC on the magnitude of these costs, with some (e.g. EnergyAustralia) noting that they are the most significant component of retail operating costs, and that changes in these costs can be a key contributor to overall retail operating costs.
- Regulatory costs – in addition to Victoria operating under a separate regulatory regime to other states, there are a range of inconsistencies in the way that individual jurisdictions have implemented the National Energy Customer Framework (NECF), such as derogations and additional reporting requirements. Changes to the national regulatory regime (such as implementation of the Power of Choice reforms) were also identified as driving costs.¹⁰³

Benchmarking against other regulatory decisions

Frontier Economics provided a summary of historical regulatory decisions on retail operating costs since 2007 by the following regulators:

- Essential Services Commission of South Australia (ESCOSA)
- Independent Competition and Regulatory Commission (ICRC) in the ACT
- Independent Pricing and Regulatory Tribunal (IPART) in NSW

¹⁰³ ACCC, Retail Electricity Pricing Inquiry – Final Report, July 2018, pp 226-229

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- Office of the Tasmanian Economic Regulator (OTTER)
- Queensland Competition Authority (QCA)
- Office of Energy (OOE) in Western Australia.

Frontier Economics found that while the regulatory allowance for retail operating costs has been between \$89-\$129 per customer, in the more recent regulatory decisions since 2013 (which include decisions from IPART, the ICRC, the QCA and OTTER¹⁰⁴) the regulatory allowance for retail operating costs has been between \$122-129 per customer (Figure 9).¹⁰⁵

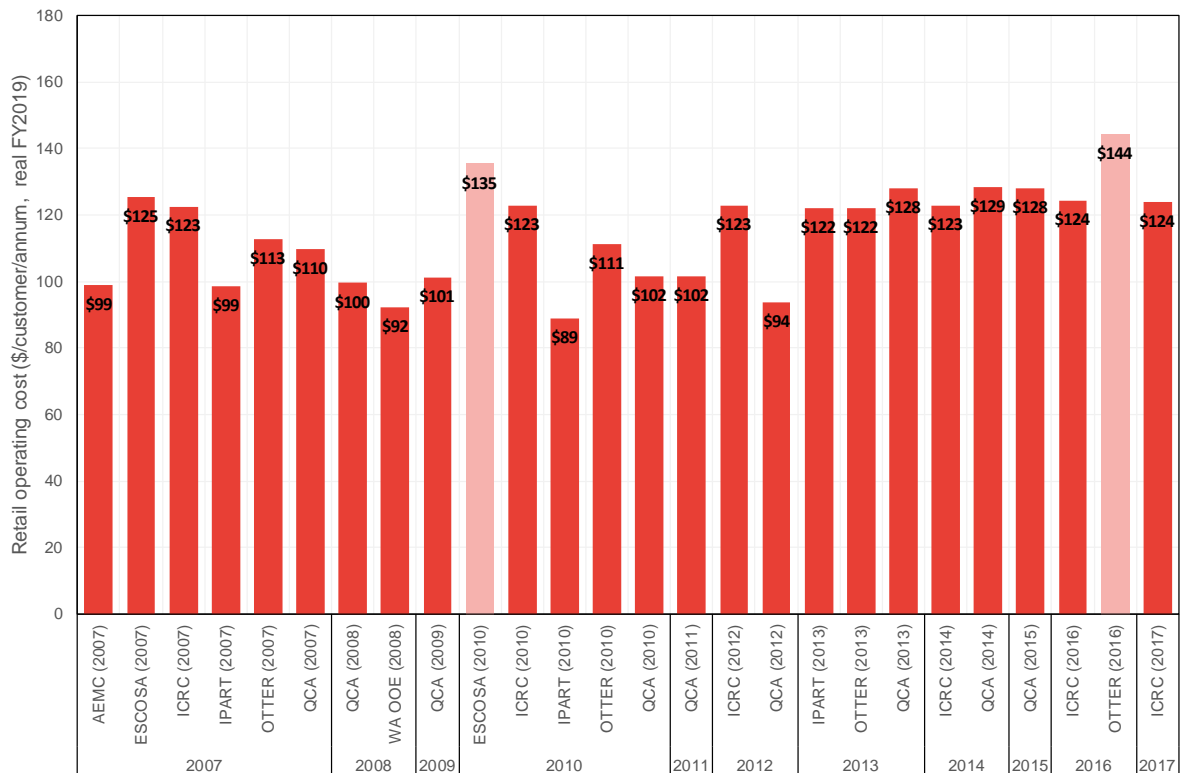


Figure 9 Regulatory allowances for retail operating costs, \$ per customer, adjusted for inflation

Source: Frontier Economics

Note: the figures for ESCOSA's 2010 decision and OTTER's 2017 decision both include CARC allowances

Market data

Frontier Economics also assessed publicly available data from Origin Energy and AGL in their annual reports. This data provided the following ranges of operating costs over the period from 2012-13 to 2017-18:

¹⁰⁴ The most recent OTTER decision (2016) is not included as it includes an allowance for CARC.

¹⁰⁵ Frontier Economics, Retail costs and margin: A report for the Essential Services Commission, April 2019, p. 8. Note: these figures are adjusted for inflation.

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- for AGL, from \$69-84 per customer
- for Origin Energy, from \$119-168 per customer.

For the most recent year of data (2017-18), the values were \$84 per customer (AGL) to \$126 per customer (Origin Energy).

Frontier Economics noted that because of the difficulty in identifying the basis on which the market data on ROC is reported, it had reservations in drawing too heavily on this data. Frontier Economics went on to state that:

“Given this, if we are to give any weight to AGL’s market data we consider that we should also give some weight to Origin Energy’s market data. Given that the estimates both show an apparent trend over time, we think the most recent estimates, which have shown some convergence, would be appropriate.”¹⁰⁶

In its submission to the working paper, AGL submitted that to make its reported figures comparable to regulatory benchmarks, it is necessary to add a portion of its centrally managed expenses. AGL stated that this results in its retail operating costs being comparable to regulatory benchmarks. AGL also noted that its reported costs are national averages, and therefore do not reflect the additional costs to operate in Victoria.¹⁰⁷

Additional regulatory costs

In our draft advice, we noted that we would include an additional allowance for recent regulatory changes, where they are material and can be reliably costed. In submissions to our staff working paper, a number of retailers highlighted different regulatory costs of operating in Victoria relative to other jurisdictions. However, none of the submissions provided estimates of the additional costs imposed by these regulatory changes. VCOSS suggested in its submission that the PDF would reduce retailer costs over time.¹⁰⁸

In our final decision on the PDF in October 2017, the cost-benefit analysis found that the PDF was expected to result in additional net annual costs to retailers in the order of \$1.21 to \$2.90 per customer (annualised over 10 years).¹⁰⁹ Given that the benchmark data we used is unlikely to fully

¹⁰⁶ Frontier Economics, Retail costs and margin: A report for the Essential Services Commission, April 2019, p. 9. Note these figures are adjusted for inflation.

¹⁰⁷ AGL, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 6.

¹⁰⁸ The Victorian Council of Social Services submission, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p.14.

¹⁰⁹ Essential Services Commission, Payment difficulty framework – Final decision, October 2017, p.109.

include these net costs, we proposed in our draft advice to include an allowance in the VDO for PDF related compliance costs at the upper end of the range, adjusted for inflation.

We noted with interest comments by some retailers that bad debt and debt collection are the most significant component of retail operating costs. The PDF in operation in Victoria since 1 January 2019 requires retailers to provide early and meaningful assistance to customers who have failed to pay their bills. These measures are designed to prevent customers and retailers finding themselves with levels of debt that are irretrievable. In other words, the PDF should reduce retailers' bad debt and debt collection costs in the years ahead. Similarly, the VDO, along with the other reforms now being implemented following the independent review, will see fewer customers on over-priced retail contracts. This too should prevent customers accumulating debt from which they cannot recover and which may be written-off by their retailer.

In our draft advice, we also noted that to the extent that retailers are able to substantiate any other material changes in costs since the ACCC's REPI analysis, we would consider these for inclusion in our final recommendation.

Draft proposal for estimating retail operating costs

In our draft advice, noting the lack of data provided by retailers on actual costs, we based our recommendations on consideration of the benchmark data to which we had access (being the ACCC REPI data and previous regulatory benchmarks), and also gave consideration to:

- The presence of economies of scale and the extent to which retailers could overcome scale issues with outsourcing arrangements.
- The extent to which there appears to be capacity in the market to serve customers at the prevailing or average costs of existing retailers (noting the apparent distribution of costs across retailers).
- The extent to which retailer's costs should be expected to fall over time, particularly in a competitive market environment.

In relation to differences between retailer size, business models and jurisdictions, we agreed with stakeholders that these issues need to be considered when undertaking a benchmarking exercise. The ACCC analysis indicates that larger retailers benefit from economies of scale. However, we noted that while the three largest retailers service about 58 per cent of Victorian residential and small business electricity customers,¹¹⁰ over 20 other retailers of varying size have remained financially viable despite not having the same benefits of scale. Indeed, the commission continues to issue licences to new retailers on a regular basis.

¹¹⁰ Essential Services Commission, Victorian Energy Market Report 2017-18, February 2019, p. 25 and p. 28.

In our draft advice, we noted retailers may outsource many of their back-of-office functions to professional service firms who may service numerous other retailers. Across their multiple clients, these service firms could attain operational economies of scale that are not achievable by individual retailers. If access to some of these benefits of scale were not possible, smaller and newer retailers would not be procuring these services from outsourced providers.

While we accepted that the larger retailers (not just the 'big 3') benefit from economies of scale, we considered other retailers are able to manage their retail operating costs using innovative and outsourced business models. If this were not the case then these retailers would not be viable in a competitive market.

The data reported by the ACCC indicates that the average retail cost for Victoria sits closer to the average for the larger retailers. This means the majority of customers are serviced by retailers whose operating costs are lower than the average operating costs reported by the ACCC.

The data published by the ACCC indicates that some retailers have much higher operating costs than the rest of the market. It is not clear why these retailers have reported such high costs given the options available to them and the competitive pressures they face.

We noted in our draft advice that in jurisdictions where prices have been previously regulated in the absence of fully contestable markets, regulators generally have made allowances for retail operating costs that are notably higher than the average level more recently reported by the ACCC. We considered that this demonstrates that retail competition has driven notable efficiencies in retailers' operating practices. As such, we took the view that the earlier regulatory benchmarks should not be adopted for the VDO.

With respect to whether we should use a new entrant as the benchmark entity to establish the retail operating costs, we noted that our terms of reference require us to recommend a VDO based on the efficient costs to run a retail business.

Our draft advice noted that over the years we have been monitoring the retail energy market, we have observed that an individual retailer's customer numbers can fluctuate quite significantly and that individual retailers can experience rapid growth in customer numbers with seemingly no disruption to their operations.¹¹¹ We interpreted this as a sign that retailers generally have sufficient capacity in their operating systems to manage these fluctuations. We recognised that the larger the retailer, the greater this capacity is likely to be (at least in absolute terms).

¹¹¹ Based on reported data in the past five years of the Victorian Energy Market Report, Simply Energy, Alinta Energy, Momentum Energy, and Powershop and MEA Group have shown significant year on year growth.

If retailers have sufficient capacity in their operating systems to service additional customers, then there is little justification (in terms of efficient pricing) for including an allowance for retailer operating costs based on potentially higher cost service providers.

The arguments outlined above, tempered by the absence of more reliable data, led us to conclude that in an efficiently operating market it would be unreasonable to assume that the marginal customer would be serviced by a retailer with costs notably higher than the average. We therefore took the ACCC's Victorian average for retail operating costs as our starting point and added a 5 per cent buffer in calculating the operating costs to be included in our cost stack for the VDO. This approach recognised that the marginal retailer servicing the marginal customer in a more efficient market, is likely to be nearer in cost to the average retailer.

Submissions on our draft advice

In submissions to our draft advice, retailers argued that our allowance for retail operating costs had been set too low, while customer groups argued that our allowance had been set too high. A number of retailers also provided confidential data on their actual or expected retail operating costs.

Retailer comments on competition impacts and possible lowering of service quality from the allowance in our draft advice

Concerns raised by retailers on the allowance for retail operating costs in our draft advice included:

- That the allowance was:
 - i. considerably lower than the costs for smaller retailers
 - ii. appeared to be weighted towards larger retailers who enjoy various competitive or cost advantages
 - iii. risked eliminating smaller retailers, who compete not only on price, but also on service and innovation.¹¹²
- That the allowance implied that retailers would need to reduce costs by outsourcing or offshoring operations, which would result in job losses for Victorians and reduce customer service levels.¹¹³

¹¹² See for example, Tango Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 1; Momentum Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 9; Powershop and MEA Group, submission to the Essential Services Commission Victorian Default Offer draft advice, pp. 3-4.

¹¹³ 1st Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 2; Momentum Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 4.

- That a low allowance for retail operating costs would mean that retailers would be unlikely to pursue innovation in operating models, retail products and offerings, or invest in alternative energy supplies where the costs of doing so is not aligned to the benchmarks or at the most efficient cost level.¹¹⁴

A number of retailers additionally noted that they expected a reduction in competition as a result of the retail operating allowance set out in our draft advice, and that they considered that this reduction in competition was not consistent with the objectives of the commission to have regard to the degree of, and scope for, competition within the industry.¹¹⁵

On the other hand, customer groups suggested that the commission should not overly focus on supporting effective competition, but rather on protecting customers and only include costs in the VDO where it is efficient to do so.¹¹⁶

Consumer groups also raised concerns that, by basing the allowance on actual costs, the VDO would not reflect efficient costs:

“...there is a risk the VDO will not represent an efficient price, because it benchmarks retail costs against observed market costs (e.g. average Victorian retail operating costs). This is likely to build in existing retailer inefficiencies. Given this risk, the ESC should choose the lowest figure in any benchmarked range of costs and only accept a higher figure where retailers can show some real increase in customer value.”¹¹⁷

The consumer groups proposed that an efficient retail cost allowance should be based on the lowest existing costs in the market, and be tested against observed service outcomes (with poor customer outcomes, such as disconnection rates and EWOV complaints suggesting of inefficiencies). The consumer groups stated that factoring smaller retailers’ higher costs into the VDO could impose higher costs on customers for little gain, and that the commission should

¹¹⁴ AGL, submission to the Essential Services Commission Victorian Default Offer draft advice, p. iii.

¹¹⁵ See for example: Tango Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 2; Powershop and MEA Group, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 2; Red and Lumo Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 1.

¹¹⁶ The Victorian Council of Social Services, submission to the Essential Services Commission Victorian Default Offer draft advice – Joint submission by the Victorian Council of Social Service, the Consumer Action Law Centre, the Financial and Consumer Rights Council and the Council on the Ageing Victoria, April 2019, p. 6.

¹¹⁷ The Victorian Council of Social Services, submission to the Essential Services Commission Victorian Default Offer draft advice – Joint submission by the Victorian Council of Social Service, the Consumer Action Law Centre, the Financial and Consumer Rights Council and the Council on the Ageing Victoria, April 2019, p.4.

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examine whether improvements in productivity or service would justify higher retail operating costs.¹¹⁸

Retailer provided data

A number of submissions to our draft advice raised concerns about the use of the ACCC REPI data. For example, Origin Energy noted that it considers that it has one of the lowest retail operating costs per customer in the market; yet its reported costs are well above the ACCC average. Origin Energy suggested that this could be due to the exclusion of 'other costs' and provided a (confidential) breakdown of its retail operating cost data, including the data provided to the ACCC, to substantiate its view.¹¹⁹ AGL raised similar concerns, noting that the ACCC figures are well below AGL's fully allocated costs, which included centrally managed expenses such as IT and insurance. AGL noted that its 2017-18 retail operating cost was over \$120 per customer when allocation of centrally managed expenses is included.¹²⁰ In its submission, EnergyAustralia also noted its concerns that the ACCC's reported costs appeared to exclude shared costs.¹²¹

Submissions from retailers also identified various changes in retail operating costs since the release of the ACCC REPI. For example, amaysim proposed that significant increases in costs (in particular, increased investment requirements and bad debt) meant that the retail operating cost allowance should be increased to \$124.02 (excluding GST).¹²²

Differing views were provided on the use of publicly reported data from listed entities, with the Australian Energy Council noting that these data were more recent than the ACCC REPI data and showed that costs had increased.¹²³ However, Sumo stated that the commission should not rely on public data from AGL and Origin Energy since it was not known which costs are included in the data.¹²⁴

A number of retailers provided data on their actual retail operating costs, what they anticipated their retail operating costs would be going forward, or specific figures that they considered provided an appropriate allowance for retail operating costs for the VDO. Generally, these figures ranged from approximately \$120 to \$150 per customer. With the exception of the figure from amaysim noted above, all other data provided to the commission were confidential.

¹¹⁸ *Ibid.*, pp. 5, 11-12.

¹¹⁹ Origin Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 6.

¹²⁰ AGL, submission to the Essential Services Commission Victorian Default Offer draft advice, pp. 6-7.

¹²¹ EnergyAustralia, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 7.

¹²² amaysim, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 8.

¹²³ Australian Energy Council, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 4.

¹²⁴ Sumo, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 7.

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In assessing the data provided by retailers, we note that:

- Varying levels of detail were provided by the retailers to substantiate the figures provided and we have not had the opportunity to undertake a detailed assessment to verify whether the reported costs are efficient.
- Some of the data related to actual historical data, while some were forecasts for the first VDO period.
- Some of the figures included estimates for additional regulatory costs (such as the PDF and best offer requirements, as set out below), however the amounts for additional regulatory costs were often not explicit or separately identified.
- Some figures reflected proposed VDO allowances rather than actual cost data. We consider that it is not unreasonable to treat these figures as estimates from the retailers of an achievable cost benchmark.

Additional costs identified by retailers

In our draft advice, we invited stakeholders to provide information on additional costs, such as new regulatory obligations, that they considered would not be apparent in current or past cost data. Additional costs identified and proposed by the retailers in submissions to our draft advice included:

- changes in regulatory obligations
- general investment needs
- embedded network costs
- prudential management costs.

The Australian Energy Council and a number of retailers identified a range of additional regulatory costs that they considered should be considered in setting the VDO, including¹²⁵:

- the payment difficulties framework (PDF)
- obligation to present best offer on bills
- provision of clear advice entitlement
- changes to estimated billing
- bill change notifications
- consumer data rights

¹²⁵ For example, Australian Energy Council submission to the Essential Services Commission Victorian Default Offer draft advice, p. 5; AGL submission to the Essential Services Commission Victorian Default Offer draft advice, p. 8; Momentum Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 6; Red and Lumo Energy submission to the Essential Services Commission Victorian Default Offer draft advice, Sumo submission to the Essential Services Commission Victorian Default Offer draft advice, p. 8; Alinta Energy submission to the Essential Services Commission Victorian Default Offer draft advice, p. 7; Powershop and MEA Group submission to the Essential Services Commission Victorian Default Offer draft advice, p. 6.

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- changes to energy price fact sheets
- the Retailer Reliability Obligation (RRO).¹²⁶

Retailers provided few estimates of the costs that would be imposed by these regulatory changes, however those that did, indicated that they expected the additional costs to range from between \$4 to \$16 per customer.¹²⁷ The commission notes that ERM Power suggested the costs of the RRO should be included in the VDO.¹²⁸ However, while the RRO is set to begin on 1 July 2019 there are currently no events declared and an event declared is unlikely to impact retailer hedging for the period of the first VDO. The commission will monitor this issue in the future.

A number of retailers also questioned the allowance provided for the PDF, which they suggested should be higher. On the other hand, the consumer groups queried the inclusion of a separate allowance for individual regulatory costs, suggesting that the commission's retail operating cost allowance should include all regulatory costs.¹²⁹

Some retailers also suggested that the commission should provide an allowance to account for investments in business development, purchases of capital assets, or depreciation of such investments, on the basis that these are legitimate expenditures required to improve customer experience, service standards and production options (which ultimately inform and enable cost reduction programs to reduce bills).¹³⁰

In its submission, Active Utilities indicated that as an embedded network it considers that it has different costs from retailers that weren't accounted for in the commission's draft advice.¹³¹ However, neither Active Utilities nor any other embedded network provided an estimate of embedded network operating costs.

Stakeholders expressed different views on the five percent adjustment to the retail operating cost allowance made by the commission in the draft advice. EnergyAustralia noted that the need to make this adjustment appeared to stem from difficulties in reconciling elements of the ACCC data,

¹²⁶ The RRO aims to support a reliable energy system by requiring companies to hold contracts or invest directly in dispatchable energy to meet demand.

¹²⁷ Retailer submissions to the Essential Services Commission Victorian Default Offer draft advice

¹²⁸ ERM Power, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 2.

¹²⁹ The Victorian Council of Social Services, submission to the Essential Services Commission Victorian Default Offer draft advice – Joint submission by the Victorian Council of Social Service, the Consumer Action Law Centre, the Financial and Consumer Rights Council and the Council on the Ageing Victoria, April 2019, pp. 5, 13.

¹³⁰ See for example, AGL submission to the Essential Services Commission Victorian Default Offer draft advice, p. 9; Red and Lumo Energy's submission to the Essential Services Commission Victorian Default Offer draft advice, p. 4; amaysim submission to the Essential Services Commission Victorian Default Offer draft advice, p. 8; Powershop and MEA Group, submission to the Essential Services Commission Victorian Default Offer draft advice, pp. 3-4.

¹³¹ Active Utilities, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 3.

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and that this issue could be resolved by adopting prior regulatory benchmarks (which EnergyAustralia suggested had accounted for issues around cost allocation).¹³² Consumer groups requested that the commission clarify the basis for the buffer in the draft advice, which they considered may be excessive given a relatively high allowance has been made for retail operating costs, when compared with historical and jurisdictional data.¹³³

Prudential requirements

Some stakeholders noted in their submissions to the draft advice that retailers face costs associated with managing prudential and trading obligations. For example:

- Alinta Energy identified prudential costs including:
 - fees associated with bank guarantees from financial institutions
 - financial fees and administrative costs in servicing security deposits
 - the weighted average economic opportunity cost of holding cash, which could have been otherwise used to pursue other productive business opportunities.¹³⁴
- amaysim and Flukes Value Management submitted that the working capital requirement reflected in the volatility allowance should be based on the prudential support requirement of AEMO plus the cash required to meet an AEMO Call Notice resulting from a stress event (rather than the volatility allowance, described in the wholesale costs section above)¹³⁵
- GloBird Energy identified a range of 'wholesale funding and trading costs' including AEMO prudential requirements (average cost \$1.60/MWh), brokerage fees (approximately \$0.45/MWh) and the funding cost on the futures contract margin (approximately \$0.55/MWh)¹³⁶
- Sumo identified credit support (working capital) requirements of \$3.60/MWh, a variation margin reserve of \$2.60/MWh and prudential requirements of approximately \$1.60/MWh.¹³⁷

The volatility allowance set out in the wholesale cost section above covers the working capital needed to provide for high-price events that may not be accounted for in overall hedging costs. We

¹³² EnergyAustralia, submission to the Essential Services Commission Victorian Default Offer draft advice, pp. 7-8.

¹³³ The Victorian Council of Social Services, submission to the Essential Services Commission Victorian Default Offer draft advice – Joint submission by the Victorian Council of Social Service, the Consumer Action Law Centre, the Financial and Consumer Rights Council and the Council on the Ageing Victoria, April 2019, pp. 12-13.

¹³⁴ Alinta Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, pp. 11-12.

¹³⁵ amaysim and Flukes Value management noted that a stress event is defined in the Market Rules as a Cumulative Price Threshold (CPT) event (equivalent to 7.5 hours at the Market Price Cap (currently \$14,500/MWh) after which the spot price is capped at the Administered Price (currently \$300/MWh)) occurring during periods of maximum demand. amaysim, submission to the Essential Services Commission Victorian Default Offer draft advice, pp. 11-12; Flukes Value Management, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 4.

¹³⁶ GloBird Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 6.

¹³⁷ Sumo, submission to the Essential Services Commission Victorian Default Offer draft advice, p.7.

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note that prudential requirements and other working capital requirements are a legitimate business expense, and should be included as a retail operating cost.

However, our approach for this initial VDO price setting exercise is not to develop a bottom-up estimate of retail operating costs, but rather we have relied upon various benchmarks and estimates of total retail operating costs to inform our decision on the allowance for retail operating costs. While we do not have access to detailed breakdowns of what is included in these benchmarks, we also have no basis to assume that any particular component of retailer costs has been excluded from these benchmarks. For example, we note that IPART's 2013 decision on regulated retail electricity prices included the costs of meeting AEMO prudential requirements along with other costs.¹³⁸

On the basis of the above, we do not consider it necessary to provide an additional allowance for prudential requirements.

Recommendation on retail operating costs

Stakeholder submissions to our draft advice generally supported the use of a benchmarking approach to determining the retail operating cost allowance for this first VDO. Therefore, we have continued to apply a benchmarking approach in our final advice, noting that we may revise this approach in the future.

In our draft advice, in the absence of data from retailers on their actual costs, we relied substantially on the benchmarks provided in the ACCC REPI on the basis that these were the most recent estimates of actual retail operating costs in the NEM and Victoria.

In response to our draft advice, a number of retailers provided confidential data on their actual retail operating costs. Upon further consideration of the figures in the ACCC REPI, and with the benefit of the additional information provided by retailers, we have identified that there is some uncertainty as to the coverage of the average retail operating cost figures in the ACCC REPI data. As noted above, retailers indicated in their submissions that they had concerns that the ACCC's reported costs appear to exclude shared costs, and provided additional data to substantiate their views.¹³⁹ Our analysis of retailer provided data suggests that at least some of the average retail operating cost figures in the ACCC REPI appear to exclude an allocation for shared costs.

Given we do not have a complete set of data from all retailers, and we have not had the opportunity to undertake a detailed review of the data or the internal cost allocation approaches

¹³⁸ IPART, Final Report – Review of retail prices for electricity from 1 July to 30 June 2016, p. 73.

¹³⁹ See for example, Origin Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 6; AGL, submission to the Essential Services Commission Victorian Default Offer draft advice, pp. 6-7; EnergyAustralia, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 7.

used by individual retailers, we are reluctant to rely on the cost data provided by retailers as the basis for our recommended allowance. We also note the concerns raised by consumer groups that basing the retail allowance on actual cost information risks building in existing inefficiencies.

Therefore, for our final advice we have decided to rely more heavily on previous regulatory benchmarks for our assessment of the appropriate retail operating cost allowance, rather than the ACCC REPI data or retailer provided data. We note that a number of stakeholders indicated some support for using previous regulatory benchmarks in their submissions.¹⁴⁰

As noted above, recent regulatory benchmarks have ranged from \$122-\$129 per customer, with the most recent decision being the ICRC's 2017 decision of \$124 per customer (see Figure 9). We note that these previous regulatory benchmarks do not account for new regulatory obligations or the costs of operating in Victoria relative to other regions in the NEM. We agree with submissions from retailers that these costs should be included in an efficient retail operating cost allowance. In coming to a view on an appropriate allowance for these additional costs, we have considered:

- Retailer provided data on additional costs from new regulatory obligations, which suggest a range from between \$4 to \$16 per customer.¹⁴¹
- The ACCC estimate in the REPI of the costs of operating in Victoria relative to regions in the NEM that have adopted the NECF of \$4 to \$11 per customer (depending on how costs are shared amongst customers).¹⁴²

In our analysis of the retailer provided data, we note that some of these estimates imply a higher allowance for the PDF than we proposed in our draft advice (of \$2.90 per customer), and some retailers also provided combined figures for Victorian-specific costs and new regulatory obligations that were within this range. Further, while we recognise that retailers are likely to incur additional costs due to new regulatory obligations, we are not convinced that all of the additional regulatory obligations identified by retailers in their submissions will necessarily lead to material increases in costs. We also note that none of the retailers identified any areas where their costs might decrease going forward. For example, a number of retailers claimed that the VDO would lessen competition in the retail energy market but provided no data on potential savings in areas such as reduced on- and off-boarding costs arising from lower switching rates.

More broadly, we believe that the changes to the Victorian market arising from the introduction of the VDO and the other reforms currently being implemented by the commission (as directed by the

¹⁴⁰ See for example, 1st Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 3

¹⁴¹ Retailer submissions to the Essential Services Commission Victorian Default Offer draft advice

¹⁴² ACCC, Retail Electricity Pricing Inquiry – Final Report, June 2018, p. 227.

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government), have the potential to lower retailers' operating costs. In the time available, we have not had the opportunity to explore the quantum of such cost reductions and so have made no provisions for these likely reductions. For now, this provides retailers with a financial buffer to manage their transition to the new operating environment.

On the basis of the above, for our final advice on the VDO, we have adopted an allowance of \$134 per customer for retail operating costs, reflecting:

- The most recently regulatory decisions on retail operating costs, and in particular, the ICRC's 2017 decision of \$124 per customer (see Figure 9), which corresponds with the figure proposed by amaysim – a small to mid-sized retailer.
- An allowance for additional costs for new regulatory obligations and Victorian specific costs of \$10 per customer, which when combined is a conservative approach at the lower end of the estimates from the ACCC and retailers on these additional costs.

While we have not based our allowance on the data provided to us by retailers, we note that our allowance is broadly in line with the low end of the range of actual cost data provided to us by retailers (which fall within a range of around \$120 to \$150 per customer), plus an allowance for new regulatory and Victorian-specific costs. Nonetheless, we did not have the chance to develop a formal data request that would provide consistent data across all retailers in the time available to deliver this advice. We anticipate that to determine an efficient cost allowance in future decisions on the VDO we will be able to more critically examine actual cost data from retailers, including the cost allocation approaches employed for the specific costs of operating in the Victorian market and the costs of meeting new regulatory obligations. We also note that the AER's final determination for the Default Market Offer indicated that retail costs in other deregulated jurisdictions were expected to remain stable in 2019-20.¹⁴³

In relation to other cost items discussed in submissions:

- Given that we have moved away from the benchmarks based on the ACCC REPI data (which average costs across all retailers), we have removed the 5 per cent buffer for retail operating costs proposed in our draft decision.¹⁴⁴
- We agree with the retailers that the VDO should be sufficient to allow retailers to make investments in new products and services, including both a return on, and depreciation of, capital investments. However, as we have adopted a benchmarking approach to establishing retail operating costs (rather than a building block approach) and a retail operating margin

¹⁴³ AER, Final Determination – Default Market Offer Prices 2019-20, April 2019 p. 59.

¹⁴⁴ We note this buffer was included given we did not have access to full details on the specific components of the ACCC data relied upon in our draft advice.

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based on EBITDA (using benchmarks originally developed by IPART), we consider that this approach is adequate to provide a reasonable return to investors in retail businesses and also accounts for depreciation.

- While we note that there are also costs faced by retailers in relation to prudential and trading requirements, we consider that these costs will already be accounted for in our underlying benchmark figures, as they are not new costs.

Recommended approach to retail operating costs

- The commission will provide a retail operating cost allowance of \$134 per customer for the calculation of the VDO.
- This allowance is based on recent decisions by Australian energy regulators, plus an allowance for the additional costs of operating in the Victorian market and new regulatory obligations for the first VDO period.
- We consider that this approach meets the requirements of the terms of reference to recommend a VDO that is based on the efficient cost to run a retail business.
- We also note that this allowance should be considered in conjunction with the allowance for customer acquisition and retention costs, set out in the following section.

3.6. Customer acquisition and retention costs

Our terms of reference require us to include a modest allowance for customer acquisition and retention costs (CARC) in calculating a VDO. Our allowance for CARC reflects the costs of competing for customers in a contestable retail market. CARC includes the cost of acquisition channels (such as third-party comparison websites and service providers, telemarketing or door-to-door sales), the cost of retention teams, and marketing costs targeted at driving customer acquisition or retention.

For timeliness and transparency, our staff paper proposed benchmarking regulatory decisions in other jurisdictions, relevant public information on costs and the ACCC's REPI final report as an interim measure in calculating a modest CARC allowance for the first VDO to apply from 1 July 2019.

Stakeholder feedback on the staff working paper

The staff working paper asked stakeholders whether they agreed with our proposed benchmarking approach and whether there were appropriate alternatives we should consider. In response, AGL

supported a benchmarking approach given many Australian regulators have used a range of regulatory benchmarks in similar price determinations and activities.¹⁴⁵

Sumo noted that while the ACCC's review was thorough, caution is needed in applying the figures in Victoria on the grounds that it was skewed toward large retailers.¹⁴⁶ Simply Energy echoed this point, suggesting costs incurred by large retailers do not reflect the experience of other market participants.¹⁴⁷

The staff paper also sought stakeholder views on what they considered should be included in the calculation of a modest allowance for CARC, and how readily they can separate CARC from their other retail operating costs.

Powershop and MEA Group noted that the breakdown of costs set out in our staff paper seemed reasonable.¹⁴⁸ Alinta Energy provided advice on activities that comprise CARC – splitting it across direct acquisition activities (such as door-to-door sales, telesales and kiosk acquisition) and indirect acquisition (including the use of comparator services, above the line brand and marketing, and product innovation).¹⁴⁹

VCOSS noted that CARC is the highest in Victoria (based on the ACCC REPI), and queried whether these costs are efficient:

“We query how much CARC is allocated to the development and promotion of inefficient and deliberately confusing marketing strategies such as discounts.”¹⁵⁰

VCOSS further noted that changes in the Victorian regulatory landscape may reduce CARC. In particular, VCOSS submitted that the Victorian Government's Energy Fairness Plan reforms,¹⁵¹

¹⁴⁵ AGL, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 5.

¹⁴⁶ Sumo, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 4.

¹⁴⁷ Simply Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 2.

¹⁴⁸ Powershop and MEA Group, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 6.

¹⁴⁹ Alinta Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 10.

¹⁵⁰ The Victorian Council of Social Services, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 12.

¹⁵¹ Victorian Labor November 2018, 'Labor's Energy Fairness Plan', accessed 21 February 2019, <https://static1.squarespace.com/static/5b46af5a55b02cea2a648e93/t/5bf3264f21c67ce36dc6f142/1542661716026/CRA+CKING+DOWN+ON+DODGY+ENERGY+RETAILERS+%E2%80%93+LABOR%E2%80%99S+ENERGY+FAIRNESS+PLAN+%281%29.pdf>

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which include a ban on door-to-door energy sales and energy cold-calling, and restrictions on sales performance bonuses for retailer marketing, should reduce retailers' costs.¹⁵²

Our draft proposal to estimating CARC

In our draft advice, we proposed to use a benchmarking approach to estimating CARC as it is transparent, relatively simple to implement and can be completed in a timely manner. Our approach to benchmarking CARC considered:

- the provision for CARC made in a range of regulatory decisions in other jurisdictions
- the findings of the ACCC's REPI final report
- information from retailers on their reported costs.

In coming to our proposed approach for calculating an allowance for CARC, we also considered feedback received from stakeholders and advice from Frontier Economics, who we engaged to provide advice on the benchmark allowance for CARC.

ACCC analysis of CARC

The ACCC found that CARC across the NEM has increased from \$33 per customer in 2007-08 to \$48 per customer in 2016-17 (both figures in \$2016-17 terms), an increase of around 45 per cent in real terms.¹⁵³

On a state-by-state basis, the ACCC also noted that in 2016-17 Victoria had the highest CARC at \$59 per customer, and also the highest switching rates. The ACCC noted that while there appeared to be positive correlation between switching activity and CARC, causation was likely to be two-directional:

- more CARC activity may promote more switching, but
- more switching may also promote efforts by retailers to retain existing customers.¹⁵⁴

Benchmarking against other regulatory decisions

Frontier Economics provided advice on appropriate sources and estimates of benchmarking data. Several regulatory decisions were identified as suitable references on the grounds they separate

¹⁵² The Victorian Council of Social Services, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 12.

¹⁵³ ACCC, Retail Electricity Pricing Inquiry – Final Report, July 2018, p 222.

¹⁵⁴ *Ibid.*

CARC from other retail costs. Those decisions have been based, at least in part, on actual cost data provided by retailers. This includes IPART, the QCA¹⁵⁵, and OTTER.

Frontier Economics found that between 2007 and 2015 the regulatory allowance for CARC has been between \$2 per customer per year and \$65 per customer per year. However, in decisions since 2013, the regulatory allowance for CARC has been \$44 to \$49 per customer per year.¹⁵⁶

Frontier Economics also provided a comparison to publicly available retail cost information on CARC. AGL reports that its CARC level has been between \$41 per customer in 2013 and \$62 per customer in 2018, while Origin Energy has reported a range of \$27 to \$47 per customer per year between 2013 and 2018.

Figure 10 provides a summary of the benchmarks highlighted by Frontier Economics as being relevant in the calculation of a CARC allowance.

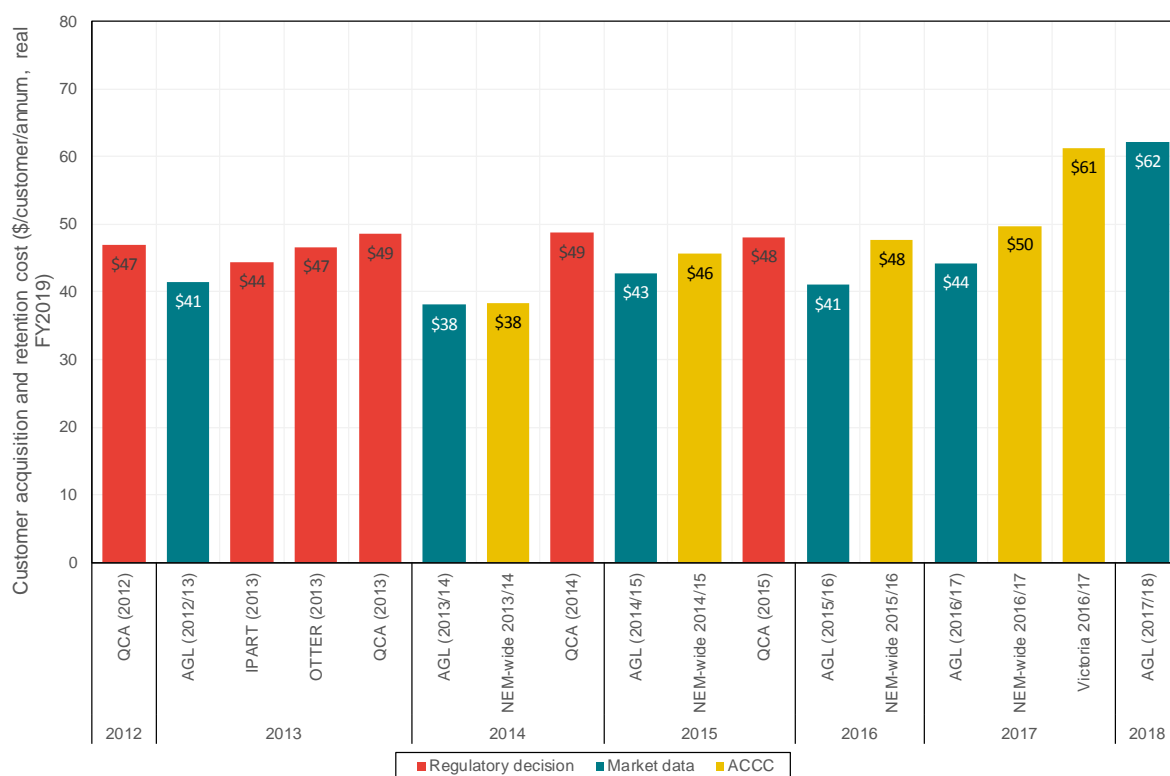


Figure 10 Summary of most relevant CARC benchmarks

Source: Frontier Economics

¹⁵⁵ Frontier Economics analysis does not include the most recent decisions from the QCA as it did not separate an allowance for CARC from the retail margin.

¹⁵⁶ Frontier Economics, Retail costs and margin: A report for the Essential Services Commission, April 2019, p. 11. Note that these figures are adjusted for inflation.

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Draft proposal on CARC

In our draft advice, we proposed to base our recommended allowance for the CARC component of the VDO on data from the ACCC REPI final report. We considered this the most applicable source of CARC benchmarking data on the basis that it was the most recent data available, and was developed using actual cost data gathered from retailers.

Our terms of reference require us to include a modest allowance for customer acquisition and retention costs. The ACCC's REPI final report identifies Victoria as having the highest CARC across the mainland NEM regions. Given the Victorian CARC appears to be the highest among contestable NEM regions we did not consider that taking the Victorian figure from the ACCC would be consistent with our terms of reference. Further, some submissions suggested that a higher allowance for CARC may be required to allow new or small entrants to gain market share. We note that in other markets higher initial costs for new entrants are likely to be funded in the short term from equity or foregone profits, not through higher prices.

In our draft advice, we considered that taking the average CARC from competitive markets, as set out in the ACCC REPI, aligned with our terms of reference on the basis that:

- It represents an average across competitive NEM jurisdictions, representing a range of levels of competition (i.e. switching rates).
- It is broadly consistent with recent regulatory decisions on CARC, which we note have been determined with a view towards supporting competition in the retail market.

On the basis of the above, in our draft advice we proposed that the allowance for CARC should be based on the average for competitive markets from the ACCC REPI final report. Adjusting for inflation, this was estimated to be \$51.48 per customer in 2019.

Submissions on our draft advice

In submissions to our draft advice, retailers argued that our allowance for CARC had been set too low, while customer groups argued that our allowance had been set too high. A number of retailers also provided data on their actual or expected CARC, although these were typically in confidential submissions.

Retailers submitted that the CARC allowance was too low

A number of submissions from retailers stated that the allowance for CARC in the commission's draft advice was too low and/or unsustainable, and that rather than being based on an average across competitive markets, it should be based on actual (or Victorian) costs, which better reflect

the dynamics of the Victorian market.¹⁵⁷ In its submission to the draft advice, Sumo stated that it considered that terms of reference, which refer to ‘current marketing standards and approaches’, require the commission to use Victorian costs as the basis for the CARC allowance.¹⁵⁸ Red and Lumo Energy submitted that CARC is important in driving customer value, by enabling retailers to make numerous offers and products available, including benefits that extend beyond providing energy:

“CARC funds choice, choice delivers commercial pressures that deliver better value to consumers. As a result, the more modest the Commission considers CARC, the less choice there is likely to be in the market for every Victorian consumer and the less rivalry to deliver better outcomes for consumers.”¹⁵⁹

In terms of the drivers of CARC:

- Alinta Energy noted that Victorian costs are higher due to the nature of the Victorian market and regulatory framework imposing the highest retail and compliance costs in the NEM.¹⁶⁰
- Sumo noted that CARC is sensitive to retailer size and customer numbers and churn, as demonstrated by the ACCC REPI data. Sumo also highlighted the impact of churn, where upfront costs to acquire are spread across the tenure of the customer meaning the longer a customer stays with a retailer, the lower the implied CARC.¹⁶¹

Retailers provided estimates of expected CARC

A number of retailers provided data on their actual CARC, or figures that they proposed the commission should adopt for the CARC allowance in the VDO, in confidential submissions. These figures range from a low of around \$40 per customer to a high of around \$90 per customer, for residential customers.

In its submission to the draft advice, AGL noted that the draft advice CARC allowance was between its recent estimates of \$43 (2016-17) and \$61 (2017-18) per customer, noting that these

¹⁵⁷ See for example: 1st Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 3; People Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 3;

¹⁵⁸ Sumo, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 9

¹⁵⁹ Red and Lumo Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 5

¹⁶⁰ Alinta Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 7

¹⁶¹ Sumo, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 9

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figures were spread across its entire customer base.¹⁶² AGL also pointed to recent and expected future increases, noting that:

- In the half year to 31 December 2018, AGL's cost to grow per account (both acquired and retained) has increased by 9 per cent nationally.
- Regulatory changes such as best offer information and the clear advice entitlement mean that further increases are likely.¹⁶³

Sumo also suggested that CARC was expected to increase, due to banning door-to-door and cold calls, as businesses will need to rely on less efficient and more expensive forms of marketing.¹⁶⁴

Red and Lumo Energy sought clarification on the treatment of business development costs, noting that these were mentioned along with CARC in the staff paper but not the draft advice, and sought confirmation that the commission will include business development and other investments in systems as part of its estimation of retailers' costs, either in retail operating costs or in CARC.¹⁶⁵

Red and Lumo Energy also noted that while retailers provided data to the ACCC for the REPI, the allocation of costs between CARC and operating costs differs from retailer to retailer – it expected that investment in business development was not included in operating costs or CARC for larger retailers, which define these as overheads.¹⁶⁶

Consumer groups submitted that the CARC allowance was too high

In its submission to the draft advice, VCOSS suggested that current Victorian marketing costs could reflect inefficiencies like high customer churn due to Victoria having the highest switching rate in the NEM. Further, due to uncertainties around identifying 'efficient' marketing costs, VCOSS proposed that the commission should set an allowance towards the lower end of the range (of recent regulatory decisions) unless a real increase in productivity from marketing costs can be demonstrated. VCOSS noted that NEM-wide CARC had increased significantly in recent years, from \$38 per customer in 2013-14 to \$50 per customer in 2016-17, which it considered is consistent with reductions in efficiency in the market. VCOSS suggested that the commission's proposed allowance in the draft advice would lock in the inefficiencies the VDO is trying to combat,

¹⁶² AGL, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 9

¹⁶³ AGL, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 9

¹⁶⁴ Sumo, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 9

¹⁶⁵ Red and Lumo Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 4

¹⁶⁶ Red and Lumo Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 4

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and proposed that the lower figure of \$38 should be adopted, or at the very most, a mid-range figure of \$44.¹⁶⁷

Our recommendation on CARC

In coming to our recommendation on the allowance for CARC in our final advice, we have considered submissions from stakeholders, the economic basis and justification for CARC, and the requirements of our terms of reference. We do not consider that our terms of reference require us to rely only on Victorian costs. Specifically, we consider that adopting the Victorian CARC from the ACCC REPI, which is the highest in the NEM, would not be consistent with the requirement in our terms of reference to base the VDO price(s) on a modest allowance for CARC.

Providing a regulatory allowance for CARC is one of the most debated of the elements in the cost stack for the VDO. As set out in the terms of reference, the VDO is intended to provide a simple, trusted and reasonably priced option for customers who are either unable or unwilling to engage with the retail electricity market. As this group of customers are not active in the market it is unclear what benefit they receive from retailers' marketing activities or why they should cross subsidise these expenditures. This was a key reason why the independent review proposed making no such allowance in their final report:

“A significant failure of the competitive market has been to allow these costs to build up and increasingly be passed to consumers with little benefits to them to outweigh the costs.”¹⁶⁸

A similar view was expressed by the Public Interest Advocacy Centre in its submission to the AER on the DMO position paper.¹⁶⁹

The joint submission from consumer groups to our draft advice was similarly reticent about including an allowance for CARC, though accepted that the commission had been directed to provide a modest allowance for CARC. The joint submission subsequently adopted a more pragmatic approach, acknowledging that the data provided in the ACCC's REPI final report might provide the basis for a useful benchmark for a CARC allowance in the initial VDO. However, the joint submission expressed concern with the approach in our draft advice which proposed to include the average from competitive markets in our cost stack. In particular, the submission highlighted that this amount was notably higher than the NEM-wide figure of \$38 only four years

¹⁶⁷ The Victorian Council of Social Services, submission to the Essential Services Commission Victorian Default Offer draft advice – Joint submission by the Victorian Council of Social Service, the Consumer Action Law Centre, the Financial and Consumer Rights Council and the Council on the Ageing Victoria, April 2019, pp.13-14

¹⁶⁸ Independent Review Panel, Independent Review of the Electricity and Gas Retail Markets in Victoria, August 2017, p. 54

¹⁶⁹ Public Interest Advocacy Centre, Submission to the default market offer price position paper, 10 December 2018.

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earlier, noting that “the \$50 figure therefore locks in the inefficiencies the VDO is trying to combat.”¹⁷⁰ As an alternative the submission proposes that the commission adopt \$38 per customer as its allowance for CARC.

Retailers’ own costs comprise retail operating costs and CARC (total retail costs). Prior to contestability in the retail sector, CARC would have been at, or close to zero. With the introduction of full retail contestability, regulatory decisions on retail energy prices (where prices controls remained in place and markets are workably competitive) have recognised some expenditure on CARC as a feature of a competitive market, and have typically included an allowance for CARC as a component of the retail cost stack. However, for consumers to benefit from competition they should derive some value from this expenditure, either in matching them to offers that are more suited to their circumstances or by allowing the seller to make efficiency savings elsewhere in their operations. Data suggests that the total expenditure in Victoria on CARC has been increasing, and it appears that some of this growing expenditure is on targeted one-off inducements to switch (e.g. gift cards) that are unlikely to be offered, or benefit, most consumers.

As highlighted by Figure 10, the regulatory allowance for CARC hovered around \$48 per customer in the years before 2015. Since that time, there have been no regulatory allowances made for CARC – largely because of price deregulation. The one notable exception has been the ICRC which, despite its ongoing role in price regulation in the ACT, has made no allowance for CARC in any of its price determinations. In its most recent report, the ICRC explained a CARC allowance is not warranted as the ACT market is “characterised by little competition and a high proportion of customers on standing offers.”¹⁷¹

The regulatory allowances for CARC prior to 2015 were made in anticipation that competition would lead to cost reductions as retailers’ marketing strategies became more effective and efficient over time. The data and feedback reported above suggests this assumption may have been misplaced as it appears that CARC expenditures by retailers are increasing.

The concerns expressed by the consumer groups, when considered alongside the findings of the independent review, have given us cause to revisit our approach to determining a modest allowance for CARC. We accept that there are not sufficient reasons to believe that current market expenditures, whether in Victoria or across the NEM, represent a suitable benchmark for the VDO that reflects a modest allowance for CARC.

¹⁷⁰ The Victorian Council of Social Services, submission to the Essential Services Commission Victorian Default Offer draft advice – Joint submission by the Victorian Council of Social Service, the Consumer Action Law Centre, the Financial and Consumer Rights Council and the Council on the Ageing Victoria, April 2019, p. 14

¹⁷¹ ICRC, Draft Report: Electricity Model and Methodology Review 2018-19, April 2019, p. 33

As already noted, there have been no regulatory decisions in recent years on which we can rely. We are also unable to rely on the figures reported by publicly listed energy companies as we have not had the opportunity to ascertain whether these figures have been compiled on a consistent basis. For these reasons, we continue to rely on the figures reported in the ACCC's final REPI report.

The data on CARC in the REPI final report highlights:

- in the four years to 2016-17, average expenditure on CARC per customer across the NEM increased from \$38 to \$50 (see Figure 10)¹⁷², and
- in 2016-17, expenditure on CARC in Victoria was 22 per cent higher than the average for all competitive markets (or \$61 compared to \$50 per customer).

The ACCC noted an apparent bi-directional correlation between expenditure on CARC and switching rates. That is, jurisdictions with higher average CARC per customer also displayed higher switching rates – although the direction of causality could not be determined. While this correlation may appear true when various jurisdictional markets are viewed at a point in time, we have estimated that CARC expenditure appears to have increased at a faster pace than switching rates. This is particularly notable in Victoria, where switching rates have remained relatively stable at around 25 per cent per year. This observation supports the views expressed in our draft advice that CARC expenditure is subject to an 'arms race' in which retailers spend increasing amounts in pursuit of a zero-sum game.

This unrequited increase in CARC lends credence to the submissions made by the consumer groups that actual CARC expenditures in Victoria do not provide a sufficiently robust basis for benchmarking a modest allowance in the VDO.

The increase in the NEM-wide level of expenditure per customer on CARC suggests that, to a greater or lesser extent, other jurisdictions (who deregulated prices later than Victoria) are now following a similar 'arms race' pattern of expenditure. This would also appear to suggest that the latest NEM-wide figures also do not provide a reasonable basis for determining a modest allowance for CARC.

Ideally, we would want to identify retailers' expenditures on CARC that predates these increases. The figures provided by the REPI final report for 2013-14 provide the best, albeit imperfect, opportunity to do so as prices were only fully deregulated in South Australia in 2013, New South Wales in 2014 and south east Queensland in 2017. (These three states account for about 83 per cent of customers in the NEM outside of Victoria.)

¹⁷² Frontier Economics, Retail costs and margin: A report for the Essential Services Commission, April 2019, p. 11.

In 2016-17, the ACCC found competitive market CARC expenditure by retailers to be \$50 per customer. The equivalent Victorian figure was \$61 per customer (see Figure 10). As the competitive market average includes the Victorian expenditures, we have considered what the average CARC expenditure would be if it was based on all competitive markets excluding Victoria.

To do this, we note that Victorian customers comprise about 32 per cent of all customers in NEM jurisdictions with deregulated prices.¹⁷³ If retailers' CARC costs in Victoria are on average \$61, then the 68 per cent of customers in other states must be paying around \$45 on average if the competitive market average is \$50. Alternatively stated, in 2016-17, average CARC per customer in Victoria was around 1.3 times higher than the average expenditure per customer across other jurisdictions with deregulated prices.

It is possible to indicate what CARC expenditures may have been historically in Victoria and other jurisdictions if the proportion of Victorian customers and ratio of CARC (32 per cent and 1.3 times) is applied to the NEM-wide finding of \$38 of CARC expenditure per customer in 2013-14. These inputs suggest an average CARC in Victoria around \$46 per customer and an average of around \$35 per customer in other NEM jurisdictions in 2013-14.¹⁷⁴

While this approach suggests that a CARC allowance that attempts to remove the effects of this 'arms race' may be around \$35 per customer, there are a number of limitations with its application at this point. This includes the fact that both the Victorian and other jurisdiction averages are based on assumptions extrapolated from 2016-17 data that cannot currently be verified. In addition, there is some inconsistency in the estimates because the 2016-17 average is based only on jurisdictions with competitive markets, while the 2013-14 is a NEM-wide average (i.e. including the ACT, Tasmania and regional Queensland).

Given these limitations, we have decided to base our modest allowance for CARC on the NEM-wide average for 2013-14 (adjusted for inflation) on the basis that this is the most robust data currently available that also limits the impact of the 'arms race' observed in recent years. The latest figure we have for CARC expenditure in Victoria is an average of \$61 from 2016-17 and the latest regulatory allowance made for CARC was by the ICRC and set at zero. In this context we consider our recommended allowance of \$38 accords with the requirements of our terms of reference – namely, that we provide a modest allowance for CARC.

¹⁷³ Based on data from State of the Energy Market 2018.

¹⁷⁴ Arguably, the ratio could be higher to reflect that the arms race was already well underway in Victoria in 2013-14. However, a higher ratio does not significantly increase the derived CARC allowance.

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While this recommendation is based on the information we currently have available to us, in future we will seek more data to inform future decisions. In addition, we will review the allowance for CARC when we set subsequent VDOs.

Recommended approach to CARC

In our final advice, we have recommended an allowance of \$38 per customer based on the NEM-wide estimate from 2013-14 in ACCC REPI final report, adjusted for inflation.

We consider that this meets our terms of reference to include a modest allowance for CARC.

3.7. Retail operating margin

The terms of reference require the commission to include an allowance for a maximum retail profit margin in our recommendation for the VDO price(s).

The retail operating margin represents the return that a retailer requires to support sufficient capital in order to finance the ongoing operation of its business. The retail operating margin needs to compensate the investor for the capital invested in the business and the systematic, or non-diversifiable risks associated with the investment. For example, these systematic risks (also referred to as market or economic risk) might include:

- The risk of variation in load profile due to changes in economic conditions that affect the demand for electricity.
- The risk of variation in wholesale electricity spot and contract prices due to changes in economic conditions and demand.
- General business risk due to changes in economic conditions.¹⁷⁵

It is important that risks accounted for in other costs are not double counted in the retail operating margin.

Stakeholder feedback on the staff working paper

The commission has previously outlined three methods for estimating the retail margin:

- bottom-up approach
- benchmark approach
- expected returns approach.

¹⁷⁵ IPART, Review of regulated retail prices and charges for electricity From 1 July 2013 to 30 June 2016 – Electricity – Final Report, June 2013, p. 88

The staff working paper proposed to use a benchmark approach, basing our recommendation for the retail margin on decisions by other regulators and data provided by retailers (if possible). The staff working paper also noted that the commission could explore adopting a transitional approach, where an initial retail operating margin is set that reduces at each subsequent price re-set.

We received a range of submissions to the staff working paper on the retail operating margin, with differing views on the proposed approach:

- A number of submissions from retailers generally supported a benchmarking approach, given the timeframes.¹⁷⁶ However, a number of retailers either provided qualified support or opposed the use of benchmarking, due to issues around the comparability of the benchmarks. Where retailers opposed the use of benchmarking for estimating the retail operating margin, the submissions generally did not provide suggestions on alternative, preferred approaches.
- Submissions from consumer advocates typically supported estimating the retail margin using benchmarks against previous regulatory decisions, and noted that they considered that the margins estimated in these decisions (such as IPART's 2013 decision) were appropriate.¹⁷⁷
- Some submissions supported the commission examining a range of approaches (benchmarking, expected returns, bottom-up calculation) including returns for other industries, particularly those with comparable risks.¹⁷⁸

Questions, largely raised by retailers, about the benchmarking approach included:

- Whether decisions by regulators in other jurisdictions (such as the most recent IPART decisions, and decisions from the ICRC) were reasonable due to differences in costs and risks between the jurisdictions, and also increases in costs and risks since the original decisions were made.¹⁷⁹
- AGL and Simply Energy questioned the use of non-energy companies in benchmarks, given the inherently different risks faced.¹⁸⁰

¹⁷⁶ See for example, AGL, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p.2

¹⁷⁷ Brotherhood of St Laurence, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 2; and VCROSS, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p.14

¹⁷⁸ See for example, EnergyAustralia, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 10

¹⁷⁹ EnergyAustralia, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 10; Momentum Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 2

¹⁸⁰ AGL, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p.7; Simply Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p.4

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- A number of submissions noted that differences between retailers such as incumbency and size would mean the benchmarked margins would not be high enough to support new entrants or smaller retailers, or to facilitate competition.¹⁸¹ For example, Alinta Energy noted:

“Any approach to estimating a retail operating margin needs to ensure it accounts for the retailer capital investment and risk associated with that investment. All of which are unique across retailers. Historic retail margins used in previous regulatory determinations have been insufficient to stimulate robust competition and investment. Whilst also stifling new market entry and placing the viability of smaller retailers at risk creating the potential for market exit.”¹⁸²

Differing views were provided on the proposal in the working paper to set a transitional retail margin which would be adjusted in future years. Some stakeholders supported the approach in so far as it was associated with an initially cautious approach to setting the margin (and VDO),¹⁸³ while others queried the rationale, and noted that it might imply inaccuracies in the initial margin and uncertainty about how future margins would be set.¹⁸⁴

A number of submissions also recognised the inter-relationships between the different components of the cost stack, and in particular, the relationship between CARC and margin.¹⁸⁵ We note these submissions, and agree with the principle that the treatment of risks and costs in other components of the cost stack could influence the selection of the appropriate retail margin. For example, we have included a volatility allowance to account for risk associated with wholesale costs.

Our draft proposal for estimating the retail operating margin

In our draft advice on the VDO, we proposed to use a regulatory benchmark approach to estimate the retail margin. We engaged Frontier Economics to provide advice on the retail margin for the VDO to apply from 1 July 2019.

¹⁸¹ Origin Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 3; VCOSS, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p. 14; Sumo, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p. 6

¹⁸² Alinta Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 11

¹⁸³ AGL, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p. 7; EnergyAustralia, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p. 10; CALC, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p.12

¹⁸⁴ Alinta Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 11; Powershop and MEA Group, submission to the Essential Services Commission Victorian Default Offer staff paper, January 2019, p. 7.

¹⁸⁵ AGL, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p.7; CALC, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, pp. 7, 11; Simply Energy, submission to the Essential Services Commission Victorian Default Offer staff paper, February 2019, p.3

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Benchmarking against other regulatory decisions

Our set of benchmarks includes the most recent regulatory allowances for the retail margin made in decisions by the QCA, the ICRC, OTTER and IPART (Table 3). The decisions on retail margin set out below were set on an earnings before interest, tax, depreciation and amortisation (EBITDA) basis, meaning that depreciation and amortisation are included in the margin. The margins are expressed as a percentage of total costs.

Table 3 Regulatory decisions on retail margin

Regulator	Margin	Decisions	Comment
QCA	5.7%	2013, 2015	Post-2015 decisions have been based on an approach that does not result in separate allowances for ROC, CARC and the retail margin. QCA concluded that the result of this approach was an allowance that was close to the previous allowance.
ICRC	5.7%	2014-2016	Based on the retail margin on the allowance used by IPART in its 2013 decision. The ICRC notes that in practice, calculating a margin of 5.7% involved multiplying each cost component by 6.04%.
OTTER	5.7%	2013, 2016	Benchmarked against the QCA, the ICRC and IPART.
IPART	5.7% 5.3%-6.1% (range)	2013	IPART had regard to three approaches to estimating the retail margin: benchmarking, the expected returns approach and the bottom-up approach. The margin of 5.7% was chosen from within a recommended range of 5.3% to 6.1%.

Source: Frontier Economics

Expected returns approach

The commission also asked Frontier Economics to estimate the retail margin for electricity retailers based on the expected returns approach to allow for comparison with the regulatory benchmarks in Table 3. The key objective of the expected returns approach is to estimate the minimum retail margin required in order to compensate equity investors in a notional electricity retailer for the systematic (i.e., non-diversifiable) risk they bear when committing equity capital to the firm.

The expected returns approach involves five main steps:

3. Proposed approach for the Victorian Default Offer

1. Derive an estimate of the benchmark Weighted Average Cost of Capital (WACC) for a notional retailer.
2. Forecast the future cash flows and returns of the notional retailer under different economic conditions.
3. Forecast the future returns on the market in different states of the market.¹⁸⁶
4. Use the forecast returns of the notional retailer and the market to compute the implied systematic risk of the notional retailer.
5. Solve for the retail margin that equalises the systematic risk implied by the retailer's forecast cash flows and the systematic risk associated with the benchmark WACC.

Frontier Economics used this approach to estimate a range for the retail margin, with the range primarily determined by varying the assumption concerning the share of fixed costs of the notional retailer. Frontier Economics also undertook sensitivity analysis on key input values for WACC (low, base and high), market volatility, demand (GDP) volatility and the share of total costs represented by fixed costs. The resulting range of the margin was between 4.4 to 7.4 per cent, as shown in the table below.¹⁸⁷

Table 4 Sensitivity of the estimated EBITDA margin to four variables considered – Frontier Economics

Parameter varied	Low	Base	High
WACC	5.3%	5.4%	5.5%
Market volatility	7.4%	5.4%	4.4%
GDP volatility	4.4%	5.4%	6.6%
Fixed share	4.9%	5.4%	6.0%

Source: Frontier Economics

¹⁸⁶ The 'market' in this context refers to the market for all assets in the economy. In principle, this market would include all assets, tradeable (including all financial and real assets) and non-tradeable (including human capital). In practice, the returns on the market are estimated using data on the stock market, assuming that a well-diversified stock index such as the All Ordinaries Index is a reasonable proxy for the market as a whole (which is, by definition, a perfectly diversified asset).

¹⁸⁷ Frontier Economics, Retail costs and margin: A report for the Essential Services Commission, April 2019, p. 30. Note the figures quoted in the draft advice were on an EBIT basis. To ensure consistency, the final advice has been updated to include figures on an EBITDA basis.

3. Proposed approach for the Victorian Default Offer

Consideration of the ACCC reported findings

In the ACCC's REPI final report it estimated an average retail margin of 11 per cent in Victoria (2017-18), compared to NEM-wide figure of 8 per cent.¹⁸⁸ The ACCC used EBITDA in the analysis in its report as a measure of the retail margin, and based its analysis on data provided by retailers on their actual financial performance.¹⁸⁹

A number of stakeholders suggested that the commission should adopt the retail margins identified by the ACCC for the purpose of calculating the VDO. In our draft advice, we identified several reservations about the suitability of the ACCC's findings in informing the allowance to be made for a retail operating margin in the VDO:

- The ACCC's findings simply reflect existing margins, as reported by retailers, at different points in time. There is no suggestion in the ACCC report, or elsewhere, that this is the level of return that retailers ought to be earning on their customer accounts. In other words, the ACCC's findings are positive rather than normative in nature.
- The possibility that the reported retail margins may include residual unallocated costs from elsewhere in retailers' cost-stacks. For example, if a retail business is a subsidiary of a larger business, corporate overhead costs may appear as a higher retail margin because these costs were not specifically allocated to the retail business in the data provided to the ACCC. While we are not suggesting this is necessarily the case, we cannot dismiss this possibility without access to additional data.¹⁹⁰
- The ACCC's findings on retail margins may include the headroom that electricity retailers earned on their customer accounts, particularly from standing offers and market offers where access to discounts had been lost. Our terms of reference specifically require that there should be no allowance for headroom in the VDO.

In light of these issues, we did not consider it appropriate to use the figures from the ACCC as the basis for setting the retail margin in our draft advice on the VDO.

Draft proposal on the retail operating margin

In our draft advice, we set out our views that:

¹⁸⁸ ACCC, Retail Electricity Pricing Inquiry – Final Report, June 2018, p. 8.

¹⁸⁹ ACCC, Retail Electricity Pricing Inquiry – Final Report, June 2018, pp. 4-5

¹⁹⁰ In March 2018, we invited retailers to share with us the data they provided to the ACCC. We did not receive sufficient data to base any conclusions on. If the legislation before Parliament is passed, we could use our information gathering powers in support of determine future values of the VDO.

3. Proposed approach for the Victorian Default Offer

- The selection of benchmark decisions (being the most recent regulatory decisions on retail energy margins in Australia) is appropriate, and likely to provide a suitable benchmark for the VDO.
- This approach is consistent with our terms of reference, which requires us to consider the costs of an efficient retailer, in that the purpose of the regulatory decisions in our benchmark set was generally to establish an efficient allowance.

However, we also recognised that it is relevant to consider whether the current operating environment in the Victorian retail energy market is significantly different from the operating environment prevailing at the time of the decisions in our benchmark set:

- Some stakeholders suggested that the Victorian retail energy market is significantly different from the NSW market at the time of IPART's most recent decision, and that the margins set by IPART were not sufficient to facilitate market entry. We considered that the jurisdictional differences between retail energy markets, with respect to the systematic risks faced by energy retailers, was relatively immaterial in the context of our decision.
- Some stakeholders suggested that the increased risks of regulatory intervention had increased the riskiness of the market. Given the early stage of regulatory changes such as the PDF and VDO, it is difficult to tell whether these changes will have a material impact on the systematic risk of the electricity retail market. In general, we would consider these risks to be non-systemic risks, and it is more appropriate to compensate for these risks through other mechanisms. In particular, where these risks can be quantified, our approach has been to include them in other components of the cost stack.

As already noted, in providing a retail operating margin, it is important that we do not compensate retailers for risks that have already been compensated elsewhere in the cost stack. Failure to do so would represent double counting of costs.

Our cost-based approach already provides for numerous risks. These include:

- Wholesale risk – we have provided a specific allowance for retailers to adopt an efficient hedging strategy against unexpected volatility in the cost of purchasing electricity in the wholesale market.
- Bad debt risk – the payment difficulty framework which took effect from 1 January 2019 has been specifically designed to reduce retailers' bad debt risks and the costs associated with debt recovery. We have made an allowance for the (net) cost of administering this framework.
- Switching risk – retailers face the risk that customers will switch to other retailers at short notice. The energy rules allow retailers to charge an exit fee to customers who switch away. Moreover, our cost-based approach to setting the VDO provides an allowance for retailers' customer acquisition and retention costs (CARC). This provides retailers with funds to manage this risk.

3. Proposed approach for the Victorian Default Offer

In our draft advice, we proposed to provide a retail operating margin in line with historical regulatory decisions to compensate retailers for systematic risks in addition to those that have been specifically compensated through our cost-based approach for determining the value of the VDO.

We proposed in our draft advice to use a 5.7 per cent retail margin (on an EBITDA basis) in the calculation of the VDO. This retail margin was based on recent decisions by Australian energy regulators. We considered that this approach met the requirements of the terms of reference to recommend a VDO that can be offered by each licensed electricity retailer. In keeping with previous regulatory decisions, our allowance for a retail margin was determined on the basis that it is levied on the retailers' entire cost base.

We also noted that this margin is comparable to, and within the feasible range of, the margin estimated by Frontier Economics using the expected returns approach.

Submissions to our draft advice

In response to our draft advice, retailers submitted a number of reasons why they believed the retail operating margin allowance should be higher.

Active Utilities, Red and Lumo Energy, and Sumo re-iterated the view that the retail operating margin should be set at the average Victorian margin from the ACCC REPI final report.¹⁹¹

A number of retailers noted that they considered that the current conditions in the Victorian energy market (such as increased wholesale market volatility, higher levels of competition and switching, and both general and specific regulatory changes) create a higher risk environment than was present at the time the regulatory benchmark decisions were made, with particular reference to IPART's decision in 2013.¹⁹² For example, Origin Energy noted that:

“Given the increase in market risk (e.g. wholesale volatility) and regulatory risk since the previous regulatory decisions, and the bias in return to the lower range, we consider that the ESC should adopt a margin at the higher end of IPART's range and adopt a margin of 6.1 per cent. We believe this provides for a conservative and pragmatic decision.”¹⁹³

¹⁹¹ Active Utilities, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 3-4; Red and Lumo Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 6; Sumo, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 1

¹⁹² See for example, Active Utilities, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 3-4; Alinta Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 5-6; Red and Lumo Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 6

¹⁹³ Origin Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 7

Alinta Energy proposed that the retail operating margin allowance should be increased to reflect:

- The maximum of the margin range identified by IPART in its 2013 decision (i.e., 6.1%), consistent with the commission's terms of reference. Alinta Energy interpreted the terms of reference, which state that VDO price(s) should include 'an allowance for maximum retail profit margin', as requiring the commission to select the upper bound, or maximum, of the range identified by IPART.
- The risk of customers switching to another retailer within the pricing period, consistent with IPART. Alinta Energy noted that IPART had taken into consideration retailers' exposure to early termination when determining the retail cost allowance (early termination fees applied in NSW at the time IPART made its decision), and given that the commission has not made an allowance in CARC for customers leaving a retailer within 12 months of moving to that retailer, the retail operating margin should be adjusted to adequately account for this risk.¹⁹⁴

In its submission to the draft advice, the Australian Energy Council stated that the approaches used by the commission to set different elements of the cost stack lacked consistency, and that this reduced the predictability of the decisions and would constrain the ability of retailers to invest. In particular, the Australian Energy Council noted that while the commission had decided to use the ACCC data rather than regulatory benchmarks to set the retail operating cost allowance, it had utilised regulatory benchmarks for setting the margin.¹⁹⁵ The Australian Energy Council also submitted that:

- If the commission considers that previous regulatory decisions overstated retail operating costs, then the margin was in fact higher than stated.
- Other regulators also included an allowance for headroom in their approach.¹⁹⁶

Red and Lumo Energy also noted that the modest CARC used in the commission's approach, as compared to the CARC used in IPART's approach, implies the margin needs to be higher.¹⁹⁷

AGL submitted that if the commission considers 5.7% to be an efficient retail margin, then it will need to set the maximum margin higher to support retail competition and allow retailers to achieve an average margin that is at or near the benchmark.¹⁹⁸

¹⁹⁴ Alinta Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, pp. 5-6

¹⁹⁵ Australian Energy Council, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, pp. 3-4

¹⁹⁶ Australian Energy Council, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 4

¹⁹⁷ Red and Lumo Energy, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 6

3. Proposed approach for the Victorian Default Offer

In its submission to the draft advice, VCOSS supported the benchmarking approach, but also suggested that the commission reconsider the range provided by Frontier under the expected returns approach, noting that a lower estimate should be adopted unless there is justifiable evidence for a higher level.¹⁹⁹

Our recommended approach to retail operating margin

For our final advice on the retail operating margin, we have decided to continue to use a benchmark approach based on recent decisions by Australian energy regulators, resulting in an EBITDA retail operating margin of 5.7 percent.

We remain of the view that it is not necessary or appropriate to base the retail operating margin allowance on the actual margin for Victoria observed by the ACCC, for the reasons set out above. We also note comments from retailers in submissions to our draft advice that the retailer operating cost data presented in the REPI appear to exclude allocations of 'other costs', such as overheads and centrally managed expenses. If this is the case, then the retail margin in the ACCC REPI may be overstated.

We note that submissions to our draft advice provided various reasons why current risks facing the sector suggest that a higher margin is required to compensate for those risks. We agree that certain risks and costs faced by retailers will have changed since the regulatory decisions that we have based our allowance on were made. However, we consider that we have adequately accounted for these changes in the individual components of the cost stack to which they relate:

- Specific risks around wholesale market volatility are addressed in the wholesale energy cost component of the cost stack. We have not seen evidence to suggest that the systematic risks associated with wholesale costs (being the undiversifiable risks associated with the impact of general movements in economic indicators such as economic growth rates) have changed.
- The costs of current (and new) regulatory obligations are covered in retail operating costs. We do not consider it necessary or appropriate to provide an adjustment to the retail operating margin to account for potential future regulatory changes.
- On the need to reflect higher switching rates in Victoria, and specifically the risk of customers transferring retailers within 12 months moving to a retailer (as per Alinta Energy's submission) –

¹⁹⁸ AGL, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019, p. 10.

¹⁹⁹ The Victorian Council of Social Services, submission to the Essential Services Commission Victorian Default Offer draft advice – Joint submission by the Victorian Council of Social Service, the Consumer Action Law Centre, the Financial and Consumer Rights Council and the Council on the Ageing Victoria, April 2019, p. 15

we consider that this is a specific, rather than systematic risk issue, which is accounted for in our allowance for CARC, discussed in section 3.6.

In response to the Australian Energy Council's comments on the consistency of our approach between the retail margin and retail operating costs, we do not agree that the retail margin must necessarily come from the same data source, or use the same approach as retail operating costs. The retail margin is expressed as a percentage of the cost stack, and compensates investors for systematic risks. To the extent that systematic risks have not changed, there is no reason to change the margin to account for different levels of retail operating costs – in the same way that we would not adjust the margin for different levels of network costs. The same applies to Red and Lumo Energy's submission on the commission's modest CARC versus IPART's CARC. However, we do note that changes to our allowance for ROC partly address the issue raised by the Australian Energy Council.

With respect to AGL's comment on requiring a higher maximum margin than 5.7% to support competition and allow retailers to earn the benchmark on average, we note that previous regulatory decisions adopting a margin allowance of 5.7% do not appear to have unduly constrained new market entry. Nor are margins capped at the allowance – if retailers are able to reduce their costs to outperform the benchmarks used to estimate the cost stack, they will be able to achieve higher margins.

We note that VCOSS has suggested we reconsider the range provided by Frontier Economics, which might suggest a lower margin. However, as noted by EnergyAustralia, Frontier Economics' expected returns figures in our draft advice were presented in EBIT terms, while our retail operating margin allowance was presented in EBITDA terms, as were the regulatory benchmarks. For our final decision, Frontier Economics have updated its figures to present them in EBITDA terms, resulting in a range of 4.4% to 7.4% (see table 4). While we will continue to consider the expected returns approach, we remain of the view that the benchmarking approach best meets our stated intent to take a transparent and simple approach that meets the requirements of the terms of reference.

We agree with stakeholder submissions to the working paper that there is value in exploring other approaches, and have cross-checked our benchmarking results with the expected returns methodology. We will continue to consider the use of the bottom-up approach in future reviews, but given the availability of data we have not undertaken a bottom-up approach for this review. As noted in our draft advice, the allowance we have set for the margin is not intended to be a transitional margin. However, this does not mean that we will not revisit our approach and margin in future decisions. We may adjust our approach in future reviews where market conditions change or we get access to new or different information.

Recommended approach to the retail operating margin

- The commission will use a 5.7 per cent retail margin (on EBITDA) in the calculation of the VDO.
- This retail margin is based on recent decisions by Australian energy regulators. We consider that this approach meets the requirements of the terms of reference to recommend a VDO that can be offered by each licensed electricity retailer.
- We also note that this margin is comparable to, and within the feasible range of, the margin estimated by Frontier Economics using the expected returns approach.

4. Estimation of the Victorian Default Offer

This chapter provides detail of how the approach described in the previous chapter has been used to calculate the VDO. This includes a discussion of how we have reflected costs in tariffs along with indicative estimated annual bills for each distribution zone and customer segment. It also includes analysis of how our final advice differs from our draft advice.

Appendix B provides the full methodology and formulae applied in the calculation of the VDO.

4.1. The form and structure of the VDO

While our approach to estimating each element of the cost stack is described in Chapter 3, an additional step is required to convert these costs into a set of VDO tariffs. The commission is guided by its terms of reference, which state that the VDO is to be a simple offer available to customers who are unwilling or unable to engage in the market. Therefore, the VDO should be based on a simple tariff structure – a supply charge presented as dollars per day and a usage charge presented as cents per kilowatt hour (kWh). This is reflected in the approach proposed in the staff working paper and our draft advice.

To achieve this structure, we recommend allocating costs that vary with consumption to the usage charge, while those costs that are fixed would be allocated to the supply charge. This is achieved by basing the VDO on the simplest network tariff option in each distribution zone, which includes a single flat usage for all distribution zones apart from AusNet Services.²⁰⁰

Stakeholder feedback on the form and structure of the VDO

A number of stakeholders from different groups supported the position in the staff paper that the VDO should be based on a flat tariff.²⁰¹ However, questions were asked about the implications of offering a flat VDO tariff to a customer whose underlying network tariff was a non-flat option such as time of use.²⁰²

²⁰⁰ In the AusNet Services distribution zone, this contains a charge for usage within a set 'block' or threshold of consumption, and then a different charge for any usage over this amount. As noted in Chapter 3 the United Energy distribution zone utilises a weighted average which combines summer and non-summer rates into a single variable charge for both the residential and small business tariff.

²⁰¹ This included the Consumer Action Law Centre, AGL, Onsite Energy Solutions and the joint submission from the Victorian distribution businesses. Reasons for support included the simplicity provided to customers, on the basis that the majority of customers are currently on flat tariffs.

²⁰² See submissions on our staff paper from Origin Energy, Alinta Energy, and the Australian Energy Council.

AGL provided support for the allocation of costs between supply and usage charges as set out in our draft advice, noting that while the draft advice proposed wholesale energy and environmental costs to be recovered entirely through supply charges, in practice retailers may allocate a proportion of these costs to its fixed component.²⁰³ EnergyAustralia advised caution in our approach to allocating costs, suggesting some of the daily charges under the draft VDO may be higher than what customers on a standing offer may currently pay.²⁰⁴

4.2. Recommended form and structure of the VDO

The commission notes that stakeholders may hold different views concerning the structure of the VDO, and which costs should be allocated as fixed or variable.

In making our recommendation, we continue to be guided by our terms of reference that state the VDO should be a simple option available to consumers.

Despite proposing to set only a flat tariff option for the VDO, the commission does not see this as placing any constraints on retailers from making market offers that reflect other structures such as time of use or demand tariffs. We also reiterate that this means the VDO aligns with the flat tariff standing offer that the majority of standing offer customers are currently on. Moreover, we are not aware of any barrier to a retailer passing on tariff reassignment costs that are levied by the network business where a customer currently assigned to a non-flat network tariff may wish to receive the VDO (which is based on a flat network tariff).²⁰⁵ The commission will monitor how distribution businesses cooperate with retailer requests for network tariff reassignments prompted by customers requesting the VDO.

As discussed in section 3.3, the commission recommends that where a residential customer has a controlled load or dedicated circuit the VDO should allow for this arrangement. In many circumstances, a consumer will not have the choice whether they have a controlled load or not. Based on this, the commission proposes that where applicable, a VDO customer would have the option of a separate charge for consumption under a controlled load or dedicated circuit. As such, we have set an additional controlled load charge for each distribution zone that is the sum of the relevant network tariff and all other variable components (see equation 3). The final column in Table 13 in section 4.4 shows the controlled load charge for each distribution zone.

²⁰³ AGL, submission to the Essential Services Commission Victorian Default Offer Draft Advice, April 2019, p. 12.

²⁰⁴ EnergyAustralia, submission to the Essential Services Commission Victorian Default Offer Draft Advice, April 2019, p. 9.

²⁰⁵ See section 35A(3) of the Energy Retail Code.

Cost allocation formulae

As described in our draft advice, we propose to allocate those costs that are fixed to the supply charge, and those costs that vary by the amount of electricity consumed to the usage charge. This is described in the equations below, with the final charges updated to include GST. Appendix B provides the full details of our process to allocating costs to each charge and the estimation of each cost stack component.

$$\text{Supply charge} = (\text{Retail Operating Costs} + \text{CARC} + \text{Fixed Network Costs} + \text{Per customer market fees and charges}) \\ \times (1 + \text{retail margin}) \times (1 + \text{GST})$$

Equation 1: Components of the supply charge

$$\text{Usage charge} = (\text{Wholesale costs} + \text{Network Losses} + \text{Environmental fees} + \text{Variable Network costs} \\ + \text{Variable market fees and charges}) \times (1 + \text{retail margin}) \times (1 + \text{GST})$$

Equation 2: Components of the usage charge

$$\text{Controlled load charge} \\ = (\text{Wholesale costs} + \text{Network Losses} + \text{Environmental fees} + \text{Controlled Load Network costs} \\ + \text{Variable market fees and charges}) \times (1 + \text{retail margin}) \times (1 + \text{GST})$$

Equation 3: Components of the controlled load charge

4.3. Estimating the cost stack components

This section details how we have calculated the VDO using the cost stack components in Chapter 3. Where necessary, all costs are indexed for inflation to December 2018 using the Australian Bureau of Statistics Consumer Price Index (All Groups, Original) to update the data.

Wholesale electricity costs

We engaged Frontier Economics to estimate wholesale electricity costs for 2019-20. As discussed in section 3.2, the commission has used the median estimate based on a 12 month trade weighted average of future contract prices. We have assumed hedging strategies that minimise the level of risk. We have also included a volatility allowance.

Wholesale costs vary across distribution zones due to differences in the load profiles of customers across Victoria. The estimates of wholesale electricity costs (including a volatility allowance) for residential and small business customers are shown in Table 5.

Table 5 Wholesale electricity forecasts for 2019-20 as at 5 April 2019 (GST exclusive)

Distribution zone	Residential		Small business	
	Costs (\$ per MWh, nominal)	Volatility allowance (\$ per MWh, nominal)	Costs (\$ per MWh, nominal)	Volatility allowance (\$ per MWh, nominal)
AusNet Services	\$105.29	\$0.16	\$99.45	\$0.19
CitiPower	\$103.05	\$0.18	\$100.92	\$0.17
Jemena	\$108.57	\$0.20	\$101.10	\$0.17
Powercor	\$103.56	\$0.16	\$96.40	\$0.10
United Energy	\$108.91	\$0.19	\$102.17	\$0.19

Source: Frontier Economics, Wholesale electricity costs: A report for the Essential Services Commission, April 2019, p. 39 and 46

Network losses

Some electricity is lost in the process of being transported through the transmission and distribution networks. The total loss factor represents the additional electricity a retailer must purchase to serve the consumption load of its customers, given these losses. The estimates in Table 6 are based on 2019-20 loss factors published by AEMO in April this year, noting that marginal loss factors are the latest draft estimates.²⁰⁶ Note that loss factors are also applied to environmental some other fees.

Table 6 Network losses

Distribution zone	Distribution loss factor (DLF)	Transmission loss factor (MLF)	Combined loss factor (DLF*MLF)
AusNet Services	1.0583	0.9915	1.0493
CitiPower	1.0474	0.9979	1.0452
Jemena	1.0418	0.9993	1.0410
Powercor	1.0682	0.9772	1.0439
United Energy	1.0570	0.9964	1.0531

Source: AEMO

²⁰⁶ Network losses based on the Distribution and (draft) Marginal loss factors published by AEMO. Accessed 16 April 2019. https://www.aemo.com.au/-/media/Files/Electricity/NEM/Security_and_Reliability/Loss_Factors_and_Regional_Boundaries/2019/Distribution-Loss-Factors-for-the-2019-20-Financial-Year.pdf

http://aemo.com.au/-/media/Files/Electricity/NEM/Security_and_Reliability/Loss_Factors_and_Regional_Boundaries/2019/Region-List-and-Draft-Marginal-Loss-Factors.pdf

Network costs

Electricity network costs consist of distribution, transmission and jurisdictional costs. Each distributor imposes both a fixed and variable charge on retail electricity businesses, as well as a charge for metering. We also include a controlled load or dedicated circuit tariff where it is applicable to residential customers. Network charges are regulated by the AER.

The network and metering charges for residential and small business customers for 2019 are summarised in the tables below.

Table 7 Residential electricity network charges (GST exclusive)

Distribution zone	Daily charge (\$/pa)	Variable charge structure	Variable charge (\$ per kWh)	Controlled load (if applicable) (\$ per kWh)
AusNet Services	\$115.00	Block 1 (1020 kWh) Block 2 (>1020 kWh)	\$0.1006 \$0.1306	\$0.0372
CitiPower	\$90.00	Anytime	\$0.0659	\$0.0216
Jemena	\$51.30	Anytime	\$0.0797	\$0.0257
Powercor	\$130.00	Anytime	\$0.0722	\$0.0232
United Energy	\$45.30	Anytime ²⁰⁷	\$0.0839	\$0.0199

Sources: Victorian distribution businesses' 2019 annual tariff statements

²⁰⁷ Derived via a weighted average of summer and non-summer rates based on residential usage in the United Energy zone.

Table 8 Small business electricity network charges (GST exclusive)

Distribution zone	Daily charge (\$/pa)	Variable charge structure	Variable charge (\$ per kWh)
AusNet Services	\$115.00	Block 1 (1020 kWh)	\$0.1402
		Block 2 (>1020 kWh)	\$0.1788
CitiPower	\$150.00	Anytime	\$0.0800
Jemena	\$95.53	Anytime	\$0.0991
Powercor	\$170.00	Anytime	\$0.0790
United Energy	\$63.33	Anytime ²⁰⁸	\$0.0994

Sources: Victorian distribution businesses' 2019 annual tariff statements

Table 9 Metering charges (GST exclusive)

Distribution zone	Annual charge (\$)
AusNet Services	\$57.80
CitiPower	\$73.00
Jemena	\$79.84
Powercor	\$73.00
United Energy	\$57.00

Sources: Victorian distribution businesses' 2019 annual tariff statements

²⁰⁸ Derived via a weighted average of summer and non-summer rates based on small business usage in the United Energy zone.

Environmental scheme costs

Electricity retailers in Victoria are required to fulfil obligations under three government environmental schemes – the Large-Scale Renewable Energy Target (LRET), the Small-Scale Renewable Energy Scheme (SRES), and the Victorian Energy Upgrades scheme (VEU).

Each scheme has a liability set each year. We take the most recent liability percentages for these schemes.

LRET

Under the LRET scheme, the liability percentage is called the Renewable Power Percentage (RPP). The Clean Energy Regulator set the RPP for 2019 at 18.6 per cent.²⁰⁹ In Victoria, this applies to the electricity acquired from the AEMO settlement point at the Victorian regional reference node. As such, the RPP is subject to electricity distribution loss factors.

Frontier Economics has calculated the cost of complying with the LRET by way of the 12 month average of market prices for certificates under this scheme (LGCs) as reported by Mercari.²¹⁰

SRES

The liability percentage under the SRES scheme is called the Small-Scale Technology Percentage (STP). The Clean Energy Regulator has published the binding STP for 2019 at 21.73 per cent.²¹¹ Historically, spot prices for certificates under the SRES (STCs) have been at or close to the clearing house price of \$40. For this reason, Frontier Economics has assumed a market price of \$40.50 for STCs.

VEU

For the cost of complying with the VEU scheme, we use the relevant greenhouse reduction rate for electricity of the reference price year being assessed. For the 2019 compliance year, the reduction rate is 0.15419.²¹²

²⁰⁹ Clean Energy Regulator, Renewable Power Percentage, accessed 16 April 2019, <http://www.cleanenergyregulator.gov.au/RET/Scheme-participants-and-industry/the-renewable-power-percentage>

²¹⁰ Mercari, LGC market, <http://lgc.mercari.com.au>.

²¹¹ Clean Energy Regulator, Small Scale Technology percentage, accessed 16 April 2019, <http://www.cleanenergyregulator.gov.au/RET/Scheme-participants-and-industry/the-small-scale-technology-percentage>

²¹² Essential Services Commission, Participating in the program, accessed 21 February 2019, <https://www.esc.vic.gov.au/victorian-energy-upgrades-program/participating-veu-program/energy-retailers-veu-program>

4. Estimation of the Victorian Default Offer

The cost of certificates under the VEU scheme (VEECs) is gathered from historic market prices. Based on currently available information, we estimate an average price of \$21.32 per certificate for 2019.

Table 10 Cost of complying with environmental schemes (GST exclusive)

Environmental scheme	Certificate price	Scheme liability	Cost (\$/MWh)
LRET	\$61.27	18.6%	\$11.40
SRES	\$40.50	21.73%	\$8.80
VEU	\$21.32	15.42%	\$3.29

Retail costs and margin

Our approach to benchmarking retail costs and margin is described in Chapter 3. Retail costs and margin do not differ across distribution zones.

Retail costs

Based on the analysis in sections 3.5 and 3.6, we have selected an allowance of \$134 for retail operating costs and \$38 for customer acquisition and retention costs (see Table 11).

Retail margin

Based on analysis in section 3.7, the commission proposes to apply a retail margin of 5.7 per cent. The retail margin represents the margin in dollars as a proportion of the total revenue.

Table 11 Retail costs and margin (GST exclusive)

Retail costs and margin	Annual allowance
Retail operating costs	\$134 per customer
Customer acquisition and retention costs	\$38 per customer
Retail margin	5.7 per cent

Other costs

Retailers incur other costs through fees for market operations and ancillary services. Information about these costs has been gathered primarily from AEMO's Budget and Fees report. The commission licence fee is derived from internal calculation of the amount. We have adopted a forecast of ancillary charges calculated by Ernst and Young for the AEMC's 2018 Residential Electricity Price Trends report.²¹³ The impact of the social cost of carbon on retailer costs is based on total small scale renewable exports in 2017-18 (as discussed in section 3.4).

Table 12 Other costs

Charge	Rate (GST excl.)
AEMO	
NEM market fees	\$0.50/MWh
Full retail contestability	\$0.08/MWh
National Transmission Planner	\$0.03/MWh
Energy Consumers Australia	\$0.52 /customer
Ancillary services	\$0.36/MWh
RERT	\$3.20 /customer
ESC licence fee	\$0.56 /customer
Feed-in Tariff (social cost of carbon)	\$6.65 /customer
Total per MWh \$0.97/MWh	
Total per customer \$10.93/customer	

²¹³ Ernst and Young, Residential Electricity Price Trends - Wholesale Market Costs Modelling 2018, p. 31.

4.4. Deriving the VDO tariffs

Based on the benchmark costs described above and the approach detailed in Appendix B, we have calculated the VDO tariffs for each distribution zone. For each distribution zone, we have calculated a proposed VDO for residential customers and small business customers. Tables 13 and 14 below set out the VDO for each category of customer. In line with our final decision in October 2018, all tariffs are expressed in GST inclusive terms.

Table 13 Recommended VDO for residential customers (GST inclusive)

Distribution zone	Daily charge (\$ per day)	Variable charge structure	Variable charge (\$ per kWh)	Controlled load (if applicable) (\$ per kWh)
AusNet Services	\$1.1368	Block 1 (1020 kWh)	\$0.2763	\$0.2024
		Block 2 (>1020 kWh)	\$0.3113	
CitiPower	\$1.1055	Anytime	\$0.2325	\$0.1809
Jemena	\$1.0037	Anytime	\$0.2547	\$0.1618
Powercor	\$1.2333	Anytime	\$0.2403	\$0.1561
United Energy	\$0.9115	Anytime	\$0.2620	\$0.1873

Table 14 Recommended VDO for small business customers less than 40 MWh per year (GST inclusive)

Distribution zone	Daily charge (\$ per day)	Variable charge structure	Variable charge (\$ per kWh)
AusNet Services	\$1.1368	Block 1 (1020 kWh)	\$0.3154
		Block 2 (>1020 kWh)	\$0.3605
CitiPower	\$1.2972	Anytime	\$0.2464
Jemena	\$1.1450	Anytime	\$0.2682
Powercor	\$1.3611	Anytime	\$0.2394
United Energy	\$0.9691	Anytime	\$0.2717

4.5. Indicative bill amounts under the VDO

The commission has calculated indicative bill amounts based on typical consumption profiles for a residential and small business customer. We have not calculated the indicative bill for a controlled load customer because it is highly dependent on individual circumstances.

Typical consumption profiles are based on our 2017-18 Victorian Energy Market Report²¹⁴ for residential customers and analysis from Energy Consumers Australia for small business customers.²¹⁵ The median residential customer in Victoria consumes about 4,000kWh per year, while the typical small business customer is assumed to consume 20,000kWh per year.

Figures 11 and 12 show how different parts of the cost stack contribute to the total VDO bill for a typical residential and small business customer in each distribution zone. Network and wholesale costs are the largest factors in the cost stack, while the retail component (including retail profit margin) contributes between 16-18 per cent to the typical residential cost stack and 7-8 per cent to the typical small business cost stack.

²¹⁴ Essential Services Commission, Victorian Energy Market Report 2017-18, February 2019, p. 41.

²¹⁵ Energy Consumers Australia, SME Retail tariff tracker, June 2018, p. 32.

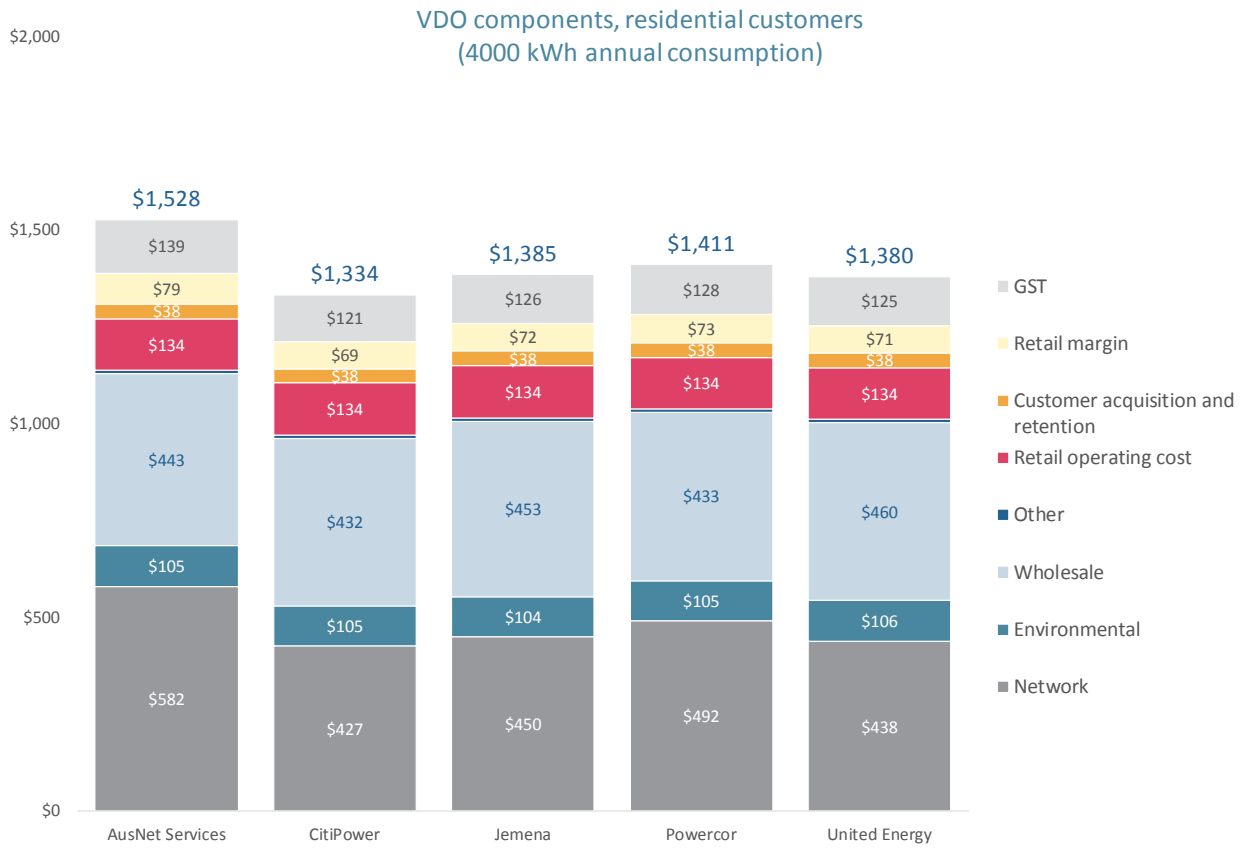


Figure 11 Cost components of the VDO, typical residential customer (GST inclusive)

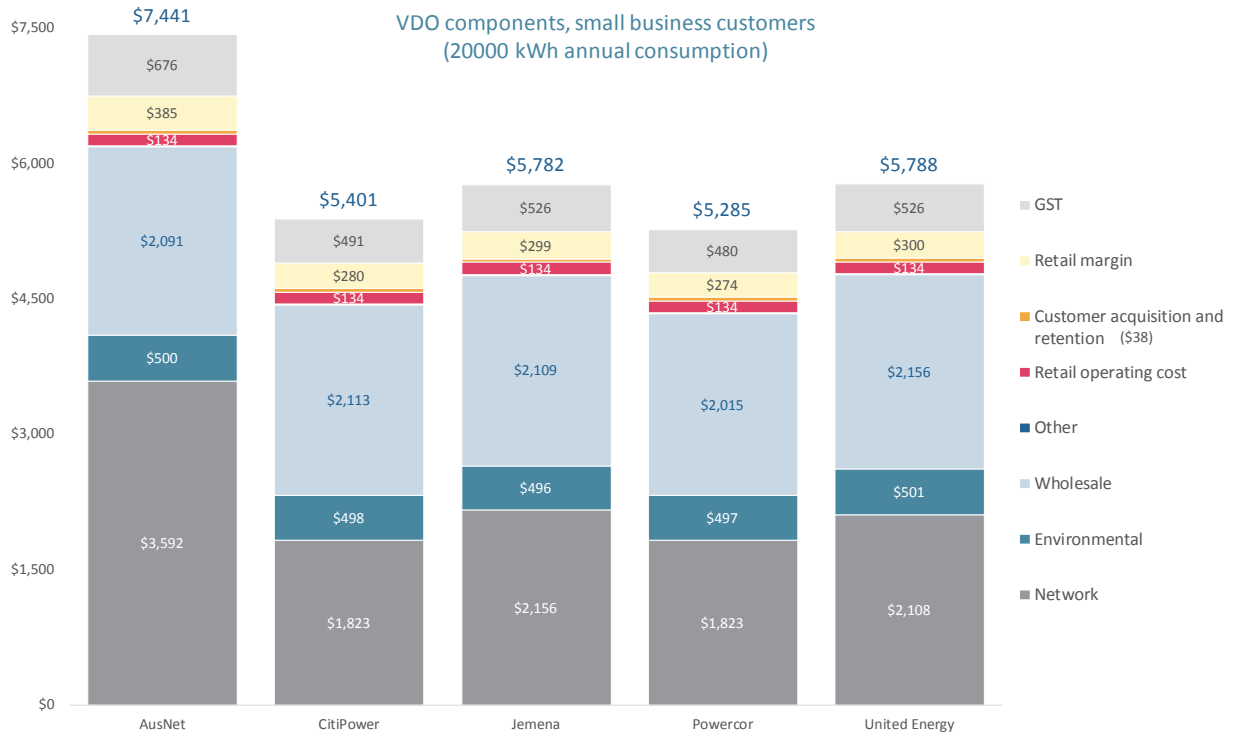


Figure 12 Cost components of the VDO, typical small business customer (GST inclusive)

4. Estimation of the Victorian Default Offer

Figures 13 and 14 show how the indicative VDO compares to market and standing offers available at the end of February for both the typical residential and small business customer.²¹⁶ The indicative VDO bill estimate is around \$310-450 lower than the median standing offer depending on the distribution zone for a typical residential customer consumption profile. For a typical small business customer this is around \$1,380-2,050 lower than the median standing offer depending on the distribution zone.

²¹⁶ Based on flat usage tariff offers only. Data collected from Victorian Energy Compare on 20 March 2019. Consumption profiles used to calculate indicative bills for AusNet and United Energy customers are based on usage consumption data provided by distribution networks.

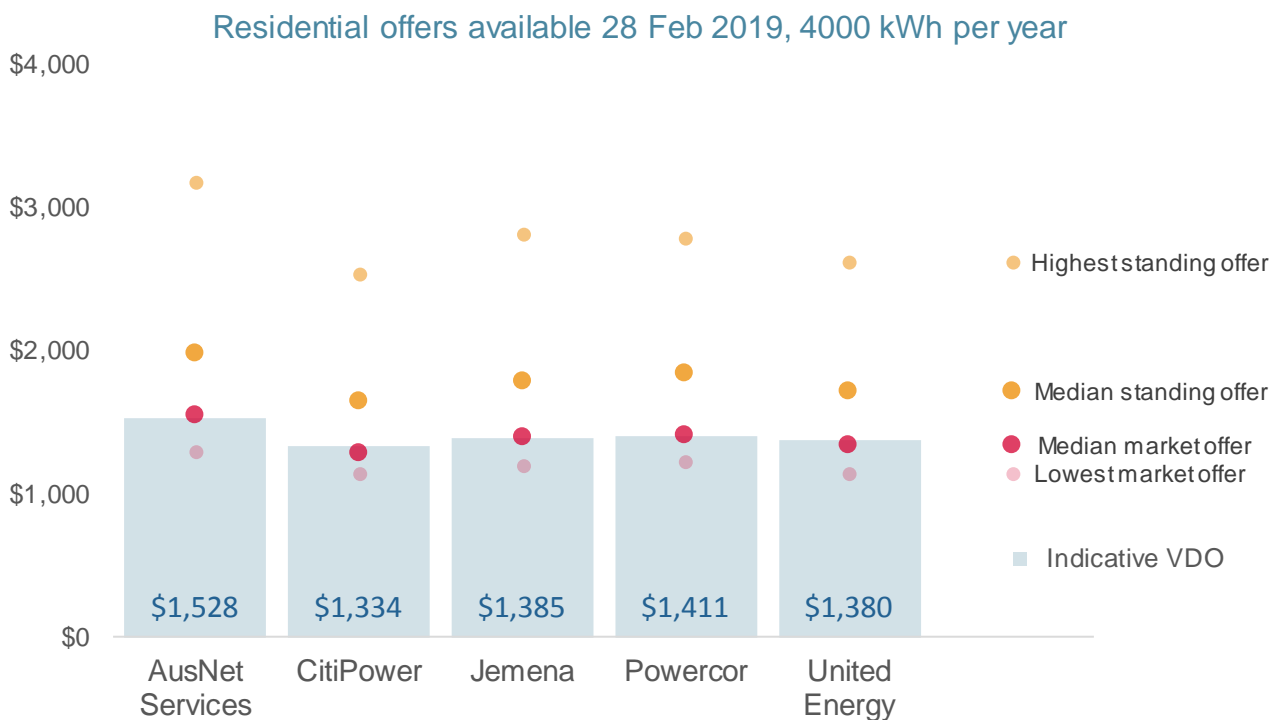


Figure 13 Comparison of the VDO with other available offers, typical residential customer (GST inclusive)

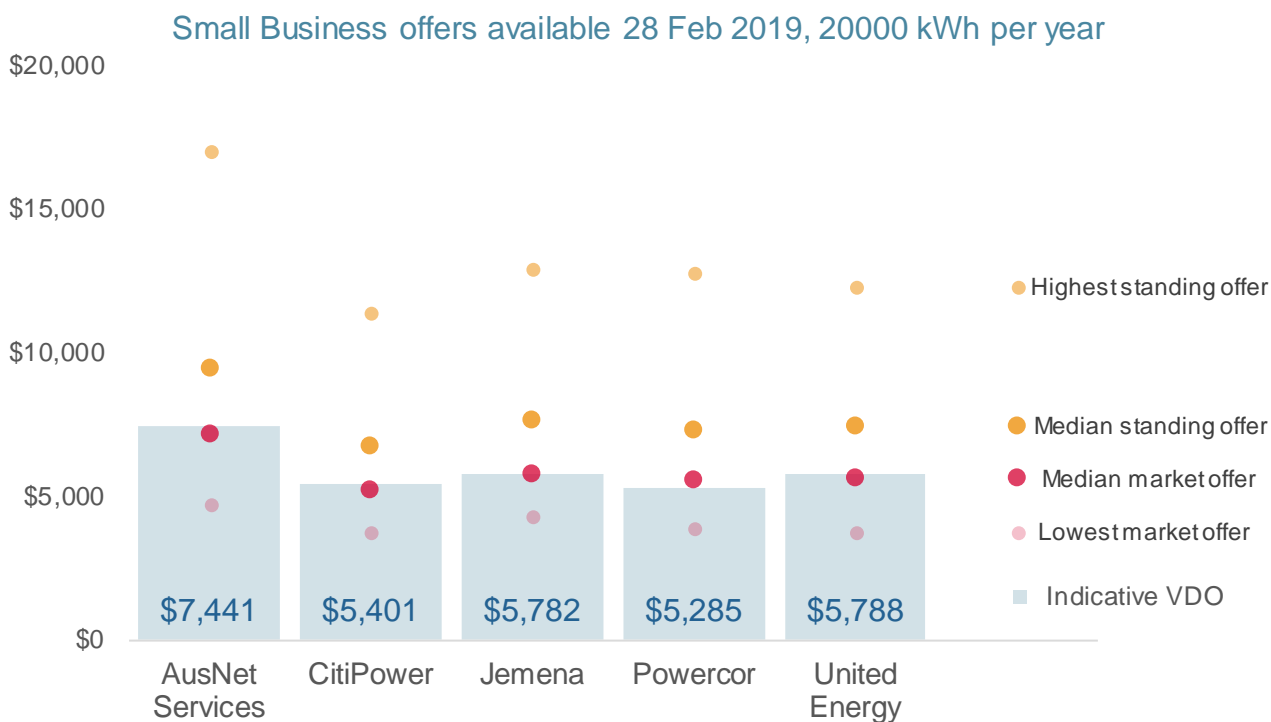


Figure 14 Comparison of the VDO with other available offers, typical small business customer (GST inclusive)

Table 15 details how the VDO might differ for residential customers with different consumption amounts across each of the distribution zones. In general, annual consumption of 2,000 kWh per year is likely to represent a small household, while 8,000 kWh per year would represent a large household. While we have provided these estimates for residential customers, we have not made

4. Estimation of the Victorian Default Offer

this comparison for small business customers because the consumption profile of each small business is contingent on the activities of their business. Table 16 shows what the indicative VDO bill savings could be for each of these residential customer types compared with the current median standing offer.

Table 15 Indicative annual VDO bill for different residential customers (GST inclusive)

Distribution zone	2 000 kWh	4 000 kWh	8 000 kWh
AusNet Services	\$968	\$1,528	\$2,763
CitiPower	\$869	\$1,334	\$2,264
Jemena	\$876	\$1,385	\$2,404
Powercor	\$931	\$1,411	\$2,372
United Energy	\$857	\$1,380	\$2,428

Source: ESC calculations

Table 16 Indicative annual VDO bill savings compared to the median standing offer for different residential customers (GST inclusive)

Distribution zone	2 000 kWh	4 000 kWh	8 000 kWh
Ausnet services	\$280	\$447	\$750
CitiPower	\$184	\$307	\$574
Jemena	\$256	\$393	\$734
Powercor	\$242	\$422	\$805
United Energy	\$204	\$331	\$586

Source: ESC calculations

4.6. Changes to components of the VDO (dollar value) since our draft advice

As discussed in Chapter 3, we have updated the VDO estimation in our final advice to reflect changes in market data and update our approach in response to feedback from stakeholders.

Table 17 below shows that for a typical residential customer this has resulted in an increase from \$61 to \$99. The differences are larger for a typical small business due to their higher consumption.

The largest contribution to the increase for residential customers is the change in wholesale electricity costs, due largely to increases in market prices on the futures market. The impact on wholesale prices for small business customers is mixed because in some cases the increase in market prices has been offset by the new load data for small business customers, which is generally flatter and less costly to serve than for residential customers.

The changes to retail operating costs add \$29 to the VDO for residential and small business customers in all distribution zones, which is partially offset by a \$13 reduction in customer acquisition and retention costs.

Changes to environmental costs due to changes in liabilities are significant for the typical small business customer due to the relatively high usage, but for a residential customer they are around \$20. Changes to other costs are generally minor and the retail margin increase is a consequence of other changes in the cost stack. Finally, the network costs increase for both residential and small business customers in the United Energy zone due to the inclusion of the PFiT charges that were overlooked in our draft advice and converting the seasonal tariff into a single flat tariff.

Table 17 Range of changes in cost components of the VDO (GST inclusive) since our draft advice – 4 000 kWh (residential) 20 000 kWh (small business)

Component	Residential change		Small business change		Reason for change		
Retail margin	\$3	to	\$5	\$3	to	\$15	Consequential change as the same percentage margin has been applied across a larger total cost stack.
Customer acquisition and retention costs	-\$13	to	-\$13	-\$13	to	-\$13	Allowance has been reduced based on feedback to draft advice.
Retail costs	\$29	to	\$29	\$29	to	\$29	The allocated amount for retail operating cost has increased.
Other	-\$3.12	to	-\$2.97	-\$3.65	to	-\$2.89	A decrease in RERT costs by around three dollars and changes to loss factors in each zone.
Wholesale	\$23	to	\$36	-\$35	to	\$135	Due to updated wholesale electricity costs and changes to loss factors in each zone.
Environmental	\$16	to	\$19	\$81	to	\$96	Due to updated environmental scheme costs and changes to loss factors in each zone.
Network	\$0	to	\$20	-\$66	to	\$0	Values here are due to updated supply and usage charges for United Energy zone – no changes in other zones.
GST	\$6	to	\$9	\$6	to	\$26	Consequential change flowing on from changes in other components.
Total VDO bill change	\$61	to	\$99	\$67	to	\$281	

4. Estimation of the Victorian Default Offer

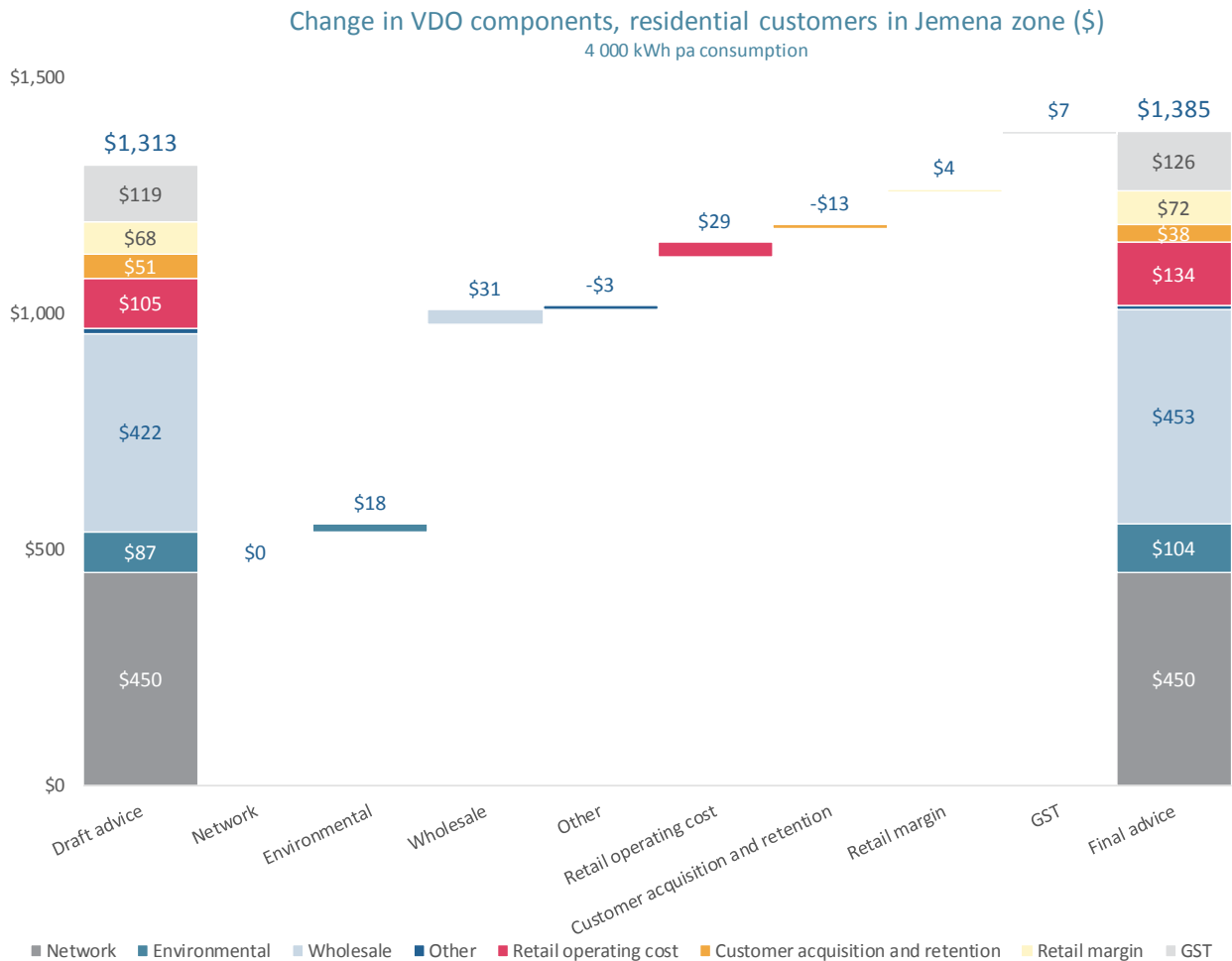


Figure 15 Dollar value changes to VDO components, typical residential customer in Jemena zone (GST inclusive)

4.7. How the VDO compares to other default offers

On 30 April 2019, the AER released its final determination for the DMO. The AER has used a price-based top-down approach for determining DMO prices, where the DMO is the mid-point of median standing offers and median market offers in a particular distribution zone.²¹⁷ While the commission has not sought to calculate the DMO in Victoria, based on the AER’s proposed methodology a hypothetical DMO would lie approximately half way between the dark orange (median standing offers) and dark red dots (median market offers) in Figures 13 and 14. This suggests the VDO would save a typical residential customer around \$150 and a typical small business customer around \$900 more than compared with the DMO, if the VDO was not implemented.

²¹⁷ AER, Draft Determination: Default Market Offer Price, April 2019, pp. 7-8.

This result is driven by the different policy objectives of the two different types of default offers – noting that the VDO and DMO would be almost identical if the AER did not provide a 50 per cent weighting to the price of standing offers in its calculation of the DMO.

5. Embedded network customers and the Victorian Default Offer

In September 2017, the Department of Environment, Land, Water and Planning released its final position paper that set out the policy for the licence exemptions framework (which applies to embedded network providers) and formed the basis for updating the General Exemption Order.²¹⁸

In November 2017, the Victorian Government gazetted the updated General Exemption Order that set out its regulations to amend the categories of licence exemptions and tasked the commission with a number of activities, including the formulation of a maximum price for selling electricity under an exemption.²¹⁹ This maximum price (or range of prices) would apply in embedded networks.

The General Exemption Order also provides a transitional provision (clause 27) which states that until the commission formulates a maximum price (or range of prices), the maximum price an exempt person can sell electricity at 'must not be more than the tariff that would apply to the customer if the customer purchased the electricity and related services pursuant to an offer made:

- a) in accordance with section 35 of the Act (Electricity Industry Act 2000); and
- b) by a licensee who is the local retailer for electricity supplied in the electricity distribution area in which the supply point for the supply of electricity to the customer is located; and
- c) in accordance with any guidelines issued by the Essential Services Commission.²²⁰

Our draft advice signalled the commission's understanding at that time. It indicated that because the VDO is designed to replace standing offer prices under section 35 of the Electricity Industry Act, it would replace the flat standing offer prices of the local retailer in each electricity distribution area. As such, the VDO would likely become the maximum price embedded network customers on flat tariffs could be charged, as set out in clause 27 of the General Exemption Order 2017.

Submissions to our draft advice

The commission received four submissions in response to its draft advice from embedded network providers (or representatives) and one embedded network customer. The feedback from embedded network providers generally related to policy or implementation matters. The customer submission supported the approach set out in our draft advice, but noted that they were still not

²¹⁸ Department of Environment, Land, Water and Planning, Victorian Government's Review of the Victorian Electricity Licence Exemptions Framework, Final Position Paper, September 2017.

²¹⁹ See clause 10 of the General Exemption Order 2017, November 2017, p. 6.

²²⁰ Clause 27 General Exemption Order 2017, November 2017, p. 9.

able to access the lowest offers available to other customers.²²¹ Submissions from embedded network providers raised the following key points:

- The VDO should not apply to embedded network providers or at least be deferred so that proper consideration can be given to the specific costs of embedded network providers.²²²
- Raised questions about how embedded network customers with non-flat tariffs would be served under the VDO and whether small business customers with annual consumption between 40 and 160 MWh per annum would receive the VDO.²²³
- Highlighted that embedded network providers would be disadvantaged relative to licensed retailers because the VDO would act as a maximum price for all their offers.²²⁴

Our response to feedback on our draft advice

The commission considers that the feedback from embedded network providers largely relates to policy matters that are outside of the scope of our terms of reference. The first two chapters of this advice set out how we have approached our terms of reference. The terms of reference do not ask the commission to consider the specific costs of embedded network providers in setting the VDO, but rather state that the VDO is based on the efficient costs of running a retail business. We have detailed our approach to this in Chapter 3.

In addition, we reiterate that the commission has delivered this advice in response to the terms of reference we received and is not to be considered as formulating a maximum price as set out in clause 10 of the General Exemption Order 2017. We simply note that a flow on impact of any future VDO is that it will apply to embedded network providers through the transitional rule in clause 27 of the General Exemption Order 2017.

In relation to questions about how the VDO will impact time of use offers and small business embedded network customers with consumption between 40 and 160 MWh per annum, the commission would highlight that these are matters dealt with by the General Exemption Order 2017 and any Governor in Council Order established under section 13 of the Electricity Industry Act.²²⁵

²²¹ Hugh Matthews, submission to the Essential Services Commission Victorian Default Offer draft advice, April 2019.

²²² Shopping Centre Council of Australia, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 4.

²²³ Shopping Centre Council of Australia, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 1, WINConnect, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 2.

²²⁴ Network Energy Services, submission to the Essential Services Commission Victorian Default Offer draft advice, p.2, Active Utilities, submission to the Essential Services Commission Victorian Default Offer draft advice, p. 4.

²²⁵ That is, the draft pricing order released for consultation by the Department of Environment, Land, Water and Planning until 1 May 2019.

6. Matters for future consideration

In December 2018, the commission received terms of reference from the Government to develop a pricing methodology for the Victorian Default Offer (VDO) by 3 May 2019. This gave us less than six months to develop a pricing methodology, gather the data to allow us to apply that methodology, release a draft proposal, consult on that draft proposal, consider submissions from energy retailers and the public, and prepare final advice to the government.

We adopted a pragmatic but soundly reasoned approach in how we responded to our terms of reference. The methodology we identified is fit for purpose in setting the initial VDO price that will take effect from 1 July 2019.

This chapter outlines the commission's views on matters to explore as part of our anticipated ongoing role in setting the price of the Victorian Default Offer. On 15 April 2019, the Department of Land, Water, Energy and Planning released a draft Order in Council that sets out a proposed framework for the commission to regulate prices for the VDO and standing offers. Once a final Order is issued, we will consider how it might influence our future approach. These matters will be the subject of further analysis and public consultation.

Pricing methodology

In developing our advice, the commission adopted a 'cost stack' approach for determining the price of the VDO. At this stage, we do not anticipate adopting a different approach. Nonetheless, we consider modifications may be needed to how each of the building blocks in the cost stack is designed if they are to be used for ongoing pricing purposes.

Some of the questions that need to be considered are briefly outlined below. For the avoidance of doubt, this is not intended to be a definitive or exhaustive discussion of the matters that may require further consideration. We also recognise that some issues are particularly complex, which means it would be unrealistic to seek to address all of them at once.

Wholesale costs

As highlighted in Chapter 3, the estimation of wholesale electricity costs in our draft advice generated a large amount of feedback about the impact on retailers and their financial viability. One possible interpretation of this feedback is predicated on the assumption that the commission will continue to benchmark the wholesale component of the VDO against actual, anticipated prices in the wholesale market — as reflected in the futures market for electricity supply contracts.

We acknowledge this concern and the potentially damaging incentives it would establish if it imposed insufficient discipline for efficient and prudent investment in future electricity generation

(and potentially, storage) capacity. This might include incentives for future investment in distributed generation and storage.

This invites the question: What other approach might the commission adopt when pricing the wholesale or generation component of the retail cost stack? One possible alternative is to give consideration to the long-run marginal cost of electricity supply into the cost stack. How we might consider this requires further thought and consultation.

Network costs

The approach we have adopted for the network component of the VDO cost stack sees us treating as a simple cost pass-through the network prices approved by Australian Energy Regulator (AER) under the rules set by the Australian Energy Market Commission (AEMC).

For now, this is a reasonable approach but over the longer-term we will need to satisfy ourselves that the assumptions underlying this approach remains justified in terms of the retail electricity market and policy environment operating in Victoria.

We may need to consider any reforms to the structure of network tariffs considered through the AER's price determination processes.

Environmental costs

As outlined in our advice, retailers are obliged to comply with various policy schemes established by either the Victorian or Commonwealth governments. Our advice seeks to benchmark the regulatory allowance in the cost stack for these schemes against existing market prices. Whether this approach will limit the incentives for energy companies to efficiently and prudently manage their costs under these schemes, is a question worthy of further consideration.

Retailer operating costs (including customer acquisition and retention costs)

The methodology we have adopted for determining the regulatory allowance for retailers' operating costs is based on information available to us about these costs at a point in time. For now, we have accepted the assumption that this information reveals costs that are efficient.

In the time available to us, we have not had the opportunity to test this assumption. However, we have previously highlighted that we consider it might be appropriate to apply an efficiency factor when setting the retail operating cost component of the VDO cost stack.²²⁶ Such an approach would be consistent with well-established regulatory pricing methodologies in many other sectors.

²²⁶ Essential Services Commission 2019, Victorian Default Offer to apply from 1 July 2019: Draft advice, 8 March, p.49.

We anticipate undertaking our own research to inform our future approach to retail operating costs, customer acquisition and retention costs (CARC), and retailer margins.

It is anticipated future iterations of the VDO will include data sourced directly from retailers (and where relevant, other stakeholders) on the specific costs of retail operations in Victoria. Our draft advice identified that a bottom-up approach to calculating retail costs is likely to be more accurate but is time and resource intensive – when compared to our current approach of benchmarking. Our role in monitoring the competitiveness and efficiency of the retail energy market in Victoria, will also instruct our approach to calculating future iterations of the VDO.

Retailer margins

The retail margin is intended to compensate investors in retail electricity companies for the systematic risk they encounter as a result of this investment. For now, we have benchmarked our allowance for the retail margin against other regulatory decisions.

We intend to undertake our own research into retailer margins. This work would inform whether our initial approach should be modified. Factors that might need to be considered include: whether the VDO changes the risks encountered by electricity retailers and how the risk margin should be applied to costs that are treated as a simple pass-through (e.g. network costs or costs incurred to limit risks such as hedging).

Tariff structures

One of the issues raised with us during the current round of consultation involved the tariff structure of the VDO. The approach proposed in this paper, was informed by our terms of reference which stated the VDO should be a 'simple' offer. As such, we have recommended a simple flat tariff structure.

Within the recommended flat tariff, we have aligned the fixed component of the VDO (or the supply charge) with the costs retailers incur which are independent of the amount of electricity they sell. Conversely, all costs that vary with the amount of electricity procured, delivered and sold by retailers have been allocated to the variable component (or usage charge) of the VDO.

Even this very simple and pragmatic approach required that we make assumptions that demanded we exercise our best judgement (largely around customer load profiles). As noted in this advice, stakeholders generally supported our approach. While we are confident these are the best assumptions in the circumstances, whether they remain the best assumptions in the future will need to be revisited. For example, the interaction between tariffs and demand management may be one area requiring further consideration.

Implementation

Our draft advice noted a number of issues outside the scope of our terms of reference, but were related to implementation of the VDO. Matters included:

- How customers transfer to the VDO.
- Whether non-flat tariffs would be included as part of the VDO in future.
- Over what time period the VDO would be implemented and when it would be reviewed.
- How the VDO interacts with other reforms.

We note that a number of these issues are addressed in the draft pricing order on which the Department of Environment, Land, Water and Planning is consulting on. We are also in the process of implementing various recommendations from the independent review. We have already given effect to recommendations 3B to 3H via two rounds of Energy Retail Code changes, which will take effect from 1 July 2019.²²⁷ These rule changes will require retailers to:

- make energy fact sheets available for each of their offers, to help customers compare offers
- include their 'best offer' on customer bills
- express tariffs, fees, prices and charges in GST inclusive terms only
- provide customers signing up to a plan with clear advice about terms and conditions of offers
- provide advance notice of changes to prices and benefits that impacts a customer's bill.

When we implemented recommendations 3B to 3H in October 2018, we noted that we would consider how the VDO would interact with these new requirements. Responses to the staff working paper on the VDO also expressed interest in how the VDO would interact with other regulatory changes.²²⁸

With the VDO now legislated and a supporting Order in Council being finalised, we are clarifying the intent of our recent rule changes in the context of the VDO as follows:

- **Best offer** – We have introduced the best offer requirement to help customers assess the energy plan they are receiving from their retailer. Customers will receive energy bills that include personalised information on the best offer from their retailer. Given retailers will be required to make the VDO available to all their customers, we expect that the VDO be included in the best offer message if it is indeed a better offer for a customer.

²²⁷ Essential Services Commission, Building trust through new customer entitlements in the retail energy market: Final Decision, October 2018, Helping customers engage confidently in the retail energy market: Final decision, March 2019.

²²⁸ Essential Services Commission, Victorian Default Offer for domestic and small business electricity customers: Staff working paper, December 2018.

We also note that the draft order supporting the VDO proposes that retailers provide information on energy bills about how a customer can access the VDO.

- **Clear advice** – We have introduced requirements for retailers to provide clear advice to a customer when seeking a better energy offer. The clear advice requirement would apply when a customer is considering signing up to a retailer's offer, or where a customer has called their existing retailer about other available offers. Given retailers will be required to make the VDO available to all their customers, we expect that where a retailer has reason to believe that the VDO may be a better option for that customer, the retailer would tell that customer about the VDO and how to access it.

Appendix A – Terms of Reference



Robin Scott MP

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Dr Ron Ben-David
Chairperson
Essential Services Commission
Level 37, 2 Lonsdale Street
MELBOURNE VIC 3000

14 DEC 2018

Dear Dr Ben-David

RETAIL MARKET REVIEW: TERMS OF REFERENCE FOR THE ESSENTIAL SERVICES COMMISSION

In accordance with my powers under section 10(g) of the *Essential Services Commission Act 2001*, I refer the Essential Services Commission the attached Terms of References to implement recommendations 1 and 2 and 4A to 4E of the *Independent Review of the Electricity and Gas Retail Markets in Victoria*.

If you have any queries on this matter please contact Annette van Rooyen, Director, Economic Division in the Department of Treasury and Finance on 9651 5351.

Yours sincerely

Robin Scott MP
Assistant Treasurer
Minister for Veterans



Fair Pricing in the Energy Market

Terms of Reference for the Essential Services Commission

The Essential Services Commission (the ESC) is requested to provide advice under Section 10(g) of the *Essential Services Commission Act 2001* to support the Government's decision to introduce a fairer-priced electricity offer, the "Victorian Default Offer", for domestic and small business customers.

Background

The *Independent Review of the Electricity & Gas Retail Markets in Victoria* (the Review), commissioned by the Victorian Government in November 2016, found that the deregulated energy market was not delivering the anticipated benefits to consumers. It made 29 recommendations designed to place consumers back on a level playing field, including changing retailer marketing practices, introducing a basic service offer and abolishing standing offer contracts.

On 26 October 2018, the government released its final response to the Review. The final response supported all recommendations, including recommendations 1 and 2 by requiring electricity retailers to offer a fairer price for energy, the "Victorian Default Offer" (VDO), and replace standing offers.

The VDO will provide a simple, trusted and reasonably priced electricity option that safeguards consumers unable or unwilling to engage in the retail electricity market without impeding the consumer benefits experienced by those who are active in the market.

Electricity VDO tariffs are to be available to customers from 1 July 2019.

Request

The ESC is requested to develop a methodology for determining an efficient price for electricity and use that methodology to recommend a VDO for Victoria that will:

- be offered unconditionally by each licensed electricity retailer to all domestic and small business customers¹ including those domestic and small business customers who export power under feed-in-tariffs;
- be the price that a retailer can charge under the VDO arrangements and is to be established as the basis for retail discounts;
- adopt the terms and conditions for standard retail contracts (i.e. standing offers); and
- be based on current marketing standards and approaches.

¹ "Domestic and small business customers" means customers who purchase power for personal, household or domestic use, and consume no more than 40 megawatt hours in a year for business use.

Fair Pricing in the Energy Market

Terms of Reference for the Essential Services Commission

The VDO price(s) should:

- be set for each distribution zone;
- be based on the efficient cost to run a retail business;
- include an allowance for a maximum retail profit margin;
- include a modest allowance for customer acquisition and retention costs; and
- not include an allowance for headroom.

In conducting its review, the ESC is required to have regard to its objectives under the *Essential Services Commission Act 2001* and *Electricity Industry Act 2000*, findings from the Review, the Government's published response to the Review, advice from relevant experts, and other matters it deems relevant.

The ESC should engage in its work with an expert panel including the Secretary of DELWP and members nominated by the Minister for Energy, Environment and Climate Change.

Reporting

Throughout the review, the ESC will advise the Assistant Treasurer and Minister for Energy, Environment and Climate Change about its progress and final approach.

Consultation

In undertaking its review, the ESC is required to consult publicly.

Completion

Unless otherwise determined by Government, the ESC must develop and apply a pricing methodology by 3 May 2019, so that retailers can offer customers the VDO by 1 July 2019.

Appendix B – Technical Methodology

Definitions

Regulatory period means the period commencing on 1 July 2019 and ending on 31 December 2019.

Distribution zone is the geographical area served by a particular distribution business.

VDO tariff formulae

The VDO consists of a fixed supply charge and a usage charge (and controlled load charge if applicable) based on the distribution zone and customer type. These are described below.

Supply charges for the VDO

The supply charge for the VDO is comprised of the retail operating costs, the fixed network charges, metering charges, and other fixed charges such as licence fees. The sum of these is multiplied by the retail margin and GST, then divided by 365 to give a dollar per day figure.

$$S_t^{i,k} (\$/day) = [(RC_t + NF_t^{i,k} + MET_t^{i,k} + FIT_t + OTHF_t) \times (1 + RM_t) \times (1 + GST)] / 365$$

where:

i Distribution business zones of AusNet Services, Citipower, Jemena, Powercor and United Energy.

t The regulatory period t commencing 1 July 2019 and ending 31 December 2019.

k Customer types of residential and small business.

$S_t^{i,k} (\$/day)$ Is the daily supply charge in dollars per day for customer type k in distribution zone i in regulatory period t.

RC_t Retail costs as defined below.

$NF_t^{i,k}$ Fixed network costs as determined by the AER for the distribution zone in the regulatory period for a customer type. The applicable network tariffs are in Tables 7 and 8, excluding GST.

$MET_t^{i,k}$ Metering costs as determined by the AER for the distribution zone in the regulatory period for a customer type (see Table 9), excluding GST.

FIT_t The cost to all energy users for the avoided social cost of carbon in the minimum

feed in tariff as described below.

$OTHF_t$	Other fixed costs as defined below.
RM_t	A figure of 6.04% is applied in our calculation, which is equivalent to an EBITDA retail margin of 5.7%.
GST	GST has the meaning given in section 195-1 of the A New Tax System (Goods and Services) Tax Act 1999 (Cth). The GST rate applicable for this regulatory period is 10 per cent.

Usage charges for the VDO

The usage charge consists of those cost elements that vary based on electricity usage and include wholesale costs, environmental scheme costs, network losses and variable network charges (which may include block charges depending on the distribution zone). The sum of these is multiplied by the retail margin and GST.

$$U_{t,w}^{i,k} (\text{cents/kWh}) = (WEC_t^{i,k} + ENV_t + EL_t^{i,k} + OTHV_t + NV_{t,w}^{i,k}) \times (1 + RM_t) \times (1 + GST)$$

where:

$U_{t,w}^{i,k} (\text{cents/kWh})$	The usage charge for block w (where applicable) in cents per kWh for customer type k in distribution zone i in regulatory period t.
$WEC_t^{i,k}$	The forecast wholesale electricity purchase costs for regulatory period t in distribution zone i, for customer type k.
ENV_t	The costs of complying with environmental schemes as defined below.
$EL_t^{i,k}$	The network losses for distribution zone i, for customer type k, in regulatory period t as described below.
$OTHV_t$	Other variable costs as described below.
$NV_{t,w}^{i,k}$	Variable network costs as outlined in Tables 7 and 8 (excluding GST). For AusNet Services, two blocks apply.
w	For United Energy, CitiPower, Jemena and Powercor, there is one usage charge. AusNet Services has two usage charges. These are: <ul style="list-style-type: none"> - For AusNet Services, w is {1,2} where block 1 is all usage up to 4,080 kWh per year and block 2 is all other usage.

Controlled load charges for the VDO

The controlled load charge consists of the relevant controlled load network charge in each distribution zone and those other cost elements that vary based on electricity usage (including wholesale costs, environmental scheme costs and network losses). The sum of these is multiplied by the retail margin and GST.

$$CL_t^{i,k} (\text{cents/kWh}) = [(WEC_t^{i,k} + ENV_t + EL_t^{i,k} + OTHV_t + NCL_t^{i,k}) \times (1 + RM_t) \times (1 + GST)]$$

where:

$CL_t^{i,k}$ (cents/kWh) The controlled load charge (if applicable) for a residential customer in cents per kWh in distribution zone i in regulatory period t. Our draft advice proposes to only apply the controlled load charge to residential customers, meaning type k customers are residential only.

$NCL_t^{i,k}$ The controlled load tariff as determined by the AER for the distribution zone in the regulatory period for a residential customer. The applicable network tariffs are in Table 7, excluding GST.

Cost components

Wholesale electricity costs ($WEC_t^{i,k}$)

Wholesale electricity costs are comprised of the contract costs for base, peak and cap, and a volatility allowance. The commission's proposal on wholesale electricity costs is shown in Table 5 of the main document.

Network and metering costs

Network costs are comprised of a fixed, or supply charge, and a variable, or usage charge.

Network costs are determined by the AER and vary based on whether the customer is residential or non-residential and by distributor. The applicable tariff codes for the two customer types are listed in Tables 7 and 8.

Metering charges are detailed in Table 9.

Retail costs (RC_t)

Retail costs for the regulatory period are the sum of retail operating costs and customer acquisition and retention costs as detailed in Table 11.

$$RC_t = ROC_t + CARC_t$$

ROC_t	Cost to serve a small customer for one year in regulatory period t.
$CARC_t$	Customer Acquisition and Retention costs for one year in regulatory period t

Retail margin (RM_t)

As noted in section 2.7, we have proposed an EBITDA retail margin of 5.7 per cent. To calculate this margin means that all relevant costs are multiplied by 6.04 per cent. The retail margin is added to all cost components prior to the addition of GST.

Environmental scheme costs (ENV_t)

Three environmental schemes operate in Victoria. The LRET and SRES are Commonwealth schemes, whereas the VEU is a Victorian based scheme. Details are found in Table 10. The schemes are calculated as follows:

$$ENV_t = (LGC_t \times RPP_t) + (STC_t \times STP_t) + (VEEC_t \times VEUL_t)$$

LGC_t	The price of an LRET certificate (in \$ for 1 MWh)
RPP_t	The renewable power percentage for regulatory period t as published by the Clean Energy Regulator
STC_t	The small scale technology certificate price (in \$ for 1 MWh)
STP_t	The small-scale technology percentage for regulatory period t as published by the Clean Energy Regulator
$VEEC_t$	The price of a VEU certificate (in \$ per certificate)
$VEUL_t$	Greenhouse reduction rate for electricity for VEU.

Energy losses ($EL_t^{i,k}$)

When electricity is transported from generators to customers via the transmission and distribution network, some of it is lost. The energy loss factors are determined by AEMO. Our estimates for these are found in Table 6.

Energy loss factors are calculated as follows:

$$EL_t^{i,k} = (WEC_t^{i,k} + ENV_t + OTHV_t) \times (MLF_t^i \times DLF_t^i - 1)$$

MLF_t^i	The average of all nodes marginal loss factor applicable to distribution zone i for regulatory period t.
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DLF_t^i The distribution loss factor applicable to distribution zone i for regulatory period t

Other costs (FIT_t , $OTHV_t$, and $OTHF_t$)

Retailers incur costs associated with operating in the market charged by AEMO and the ESC, such as market fees and licence fees.

Market operator and other fees

$$OTHV_t = NEM_t + FRC_t + NTP_t + AS_t$$

NEM_t NEM fees as set out by AEMO for the regulatory period t.

FRC_t Costs of full retail contestability recovered by AEMO for the regulatory period t.

NTP_t National Transmission Planner costs recovered by AEMO for the regulatory period t.

AS_t Estimated ancillary service fees recovered by AEMO for the regulatory period t.

$$OTHF_t = CAP_t + RERT_t + ESC_t$$

CAP_t Consumer advocacy panel fees recovered by AEMO for the regulatory period t.

$RERT_t$ Estimated reliability and emergency reserve fees recovered by AEMO.

ESC_t ESC licence fees for the regulatory period t.

FiT

$$FIT_t = \frac{EXP_t}{CUST_t} \times AVC_t$$

EXP_t	The total export from small renewable for all distribution zones in 2017-18.
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$CUST_t$	Average total small electricity customers in Victoria for 2017-18.
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AVC_t	The avoided social cost of carbon included in the minimum feed-in tariff for the regulatory period t.
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Appendix C – Proposed VDO tariffs to apply from 1 July 2019

Table 18 Recommended VDO for residential customers (GST inclusive)

Distribution zone	Daily charge (\$ per day)	Variable charge structure	Variable charge (\$ per kWh)	Controlled load (if applicable) (\$ per kWh)
AusNet Services	\$1.1368	Block 1 (1020 kWh) Block 2 (>1020 kWh)	\$0.2763 \$0.3113	\$0.2024
Citipower	\$1.1055	Anytime	\$0.2325	\$0.1809
Jemena	\$1.0037	Anytime	\$0.2547	\$0.1618
Powercor	\$1.2333	Anytime	\$0.2403	\$0.1561
United Energy	\$0.9115	Anytime	\$0.2620	\$0.1873

Table 19 Recommended VDO for small business customers with consumption less than 40 MWh per year (GST inclusive)

Distribution zone	Daily charge (\$ per day)	Variable charge structure	Variable charge (\$ per kWh)
AusNet Services	\$1.1368	Block 1 (1020 kWh)	\$0.3154
		Block 2 (>1020 kWh)	\$0.3605
Citipower	\$1.2972	Anytime	\$0.2464
Jemena	\$1.1450	Anytime	\$0.2682
Powercor	\$1.3611	Anytime	\$0.2394
United Energy	\$0.9691	Anytime	\$0. 2717

Appendix D – Submissions received on our staff paper

Name or organisation	Date received
GloBird Energy	29 January 2019
Onsite Energy Solutions	30 January 2019
Consumer Action Law Centre	30 January 2019
Powershop and MEA Group	30 January 2019
Uniting Church in Australia – Synod of Victoria and Tasmania	30 January 2019
EnergyAustralia	30 January 2019
Simply Energy	30 January 2019
Victorian Council of Social Service	30 January 2019
Australian Energy Council	30 January 2019
Alinta Energy	30 January 2019
Momentum Energy	30 January 2019
CitiPower, Powercor & United Energy	31 January 2019
AGL Energy	31 January 2019
St Vincent de Paul Society – Victoria	31 January 2019
Brotherhood of St Laurence	1 February 2019
Origin Energy	1 February 2019
Sumo	4 February 2019

Appendix E – Submissions received on our draft advice

Name or organisation	Date received
Michelle Webb	20 March 2019
Hugh Mathews	1 April 2019
CitiPower, Powercor and United Energy	1 April 2019
Active Utilities	1 April 2019
GloBird Energy	3 April 2019
Tango Energy	4 April 2019
Victorian Council of Social Service, Consumer Action Law Centre, Financial and Consumer Rights Council and Council on the Ageing	4 April 2019
Sumo	4 April 2019
Shopping Centre Council of Australia	4 April 2019
WINConnect	4 April 2019
Network Energy Services	4 April 2019
amaysim	4 April 2019
1st Energy	4 April 2019
Momentum Energy	4 April 2019
People Energy	4 April 2019
Australian Energy Council (Supplementary attachments)	4 April 2019 16 and 17 April 2019
ERM Power	4 April 2019
Fluke's Value Management	4 April 2019
Powershop and MEA Group	4 April 2019

Red and Lumo Energy	4 April 2019
AGL	4 April 2019
ACCC	4 April 2019
Origin Energy	4 April 2019
EnergyAustralia	5 April 2019
Alinta Energy	8 April 2019
Brotherhood of St. Laurence	8 April 2019

Appendix F – VDO comparison with market offers

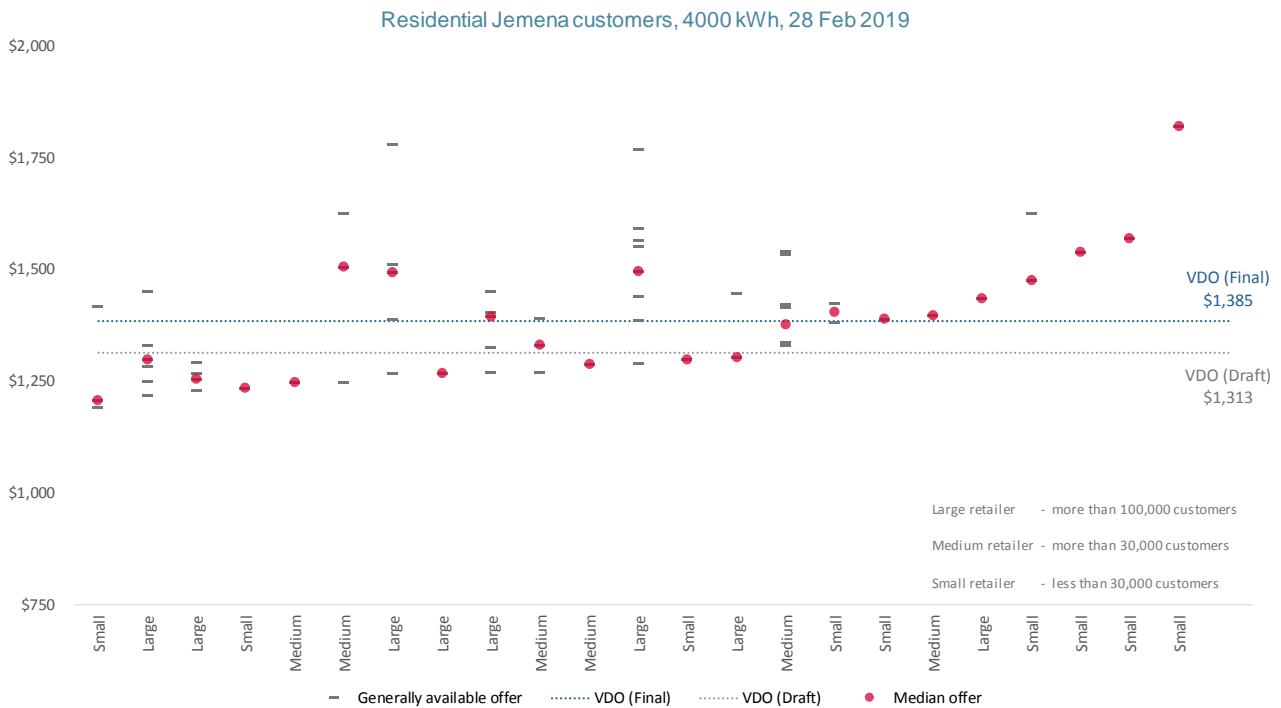


Figure 16 Comparison of Jemena residential VDO against market offers available to Jemena residential customers on 28 Feb 2019 (GST inclusive)