

# STANDING OFFER PRICES FOR THE SUPPLY OF ELECTRICITY TO SMALL CUSTOMERS FROM 1 JULY 2017:

ACTEWAGL RETAIL RESPONSE TO DRAFT  
REPORT FROM THE INDEPENDENT  
COMPETITION AND REGULATORY COMMISSION

Version number 1.0

Effective date: 28 April 2017

**ActewAGL**

*for you*

## Table of contents

1. Introduction .....	3
2. Form of Control .....	4
3. Cost components .....	4
3.1 Energy Purchase Cost Model .....	4
3.2 Retail Margin .....	5
3.2 Retail Operating Costs .....	9
3.3 Other Model Components .....	10
4 Pass Through Arrangements .....	12
4.2 Power of Choice Pass Through Event .....	12
4.3 Proposed Change to the Dates for a Regulatory Change Event .....	13
5 Annual Recalibration .....	15
Attachment 1 .....	16
Attachment 2 .....	17

# 1. Introduction

This submission is prepared by ActewAGL Retail (AAR) in response to the Independent Competition and Regulatory Commission's (ICRC) Draft Report (Draft Report) and proposed Price Direction released on 28 March 2017. The ICRC's Draft Report sets out the "draft decision on the proposed regulatory approach and methodology, components of the pricing model to calculate the draft decision on the price adjustment for 2017/18 and the proposed price direction."<sup>1</sup>

It is AAR's view that competition continues to increase in the ACT retail electricity market and therefore retail price regulation is no longer warranted. However, given that retail regulation is to continue for a further three years, AAR encourages the Commission to regulate retail prices in a manner that allows proper compensation of efficient costs and that consistency and predictability of the regulatory framework are vital to provide certainty to consumers and retailers.

The Draft Report follows the ICRC's Framework and Approach Issues Paper released on 24 October 2016 which AAR responded to on 30 November 2016.

There are two key issues of concern to AAR in the ICRC's Draft Report:

- The ICRC's new proposed approach to calculate the retail margin, which uses the consumer price index (CPI) to index the dollar per MWh value of last year's retail margin, is flawed because the costs that the margin recovers are not driven by CPI.

Given the significant concerns that AAR has with the ICRC's departure from standard regulatory practice in the calculation of the retail margin, AAR obtained independent advice from economic experts HoustonKemp (see Attachment 1). The HoustonKemp report explains the purpose of the retail margin, the deficiencies of the ICRC's proposed new approach and the basis of the total revenue approach applied by other regulators to calculate the retail margin.

AAR urges the ICRC to retain the approach for the retail margin used in previous decisions, an approach based on empirical analysis and consistent with best practice regulation.

- The ICRC has not indicated whether AAR's incurred costs to comply with the Power of Choice regulatory changes are eligible for pass through. AAR considers that these are legitimate regulatory costs that should be allowed.

These two primary matters and other comments on the Draft report are addressed further in the submission.

---

<sup>1</sup> ICRC 2017 Standing offer prices for the supply of electricity to small customers from 1 July 2017: Draft Report p.ix

## 2. Form of Control

AAR supports the continuation of the current form of control, which is a weighted average price cap that determines the maximum allowable average percentage change that AAR can apply to its suite of regulated tariffs. As discussed in AAR's response to the Framework and Approach Issues Paper, this approach provides AAR with the flexibility to set individual tariffs to better reflect customer preferences within an overall price cap.

## 3. Cost components

In AAR's response to the ICRC's Framework and Approach Issues Paper, AAR supported the continued use of the ICRC's cost-index model. The main reason was that it provided AAR with a consistent and predictable approach to retail price regulation. The AEMC has emphasised the importance of regulatory certainty in its advice to regulators on best practice for retail price regulation<sup>2</sup>. The consistency and predictability of the ICRC's long standing and established approach would be put at risk if the proposed adjustment to the retail margin component of the cost-index model is maintained in the final decision.

This section provides AAR's response to the ICRC's methodology proposed in the Draft Report for each of the main components of the cost index model.

### 3.1 Energy Purchase Cost Model

The ICRCs energy purchase cost model is an appropriate market based approach to modelling the costs that retailers face in obtaining energy<sup>3</sup>. AAR supports the ICRC proposed changes to the energy purchase cost model:

- to use the Australian Stock Exchange (ASX) forward price data instead of ICAP's Over the Counter data;
- to revert to the data periods used for averaging from 21 to 23 months; and
- to continue to include the carbon cost (C) in the model but setting it to zero.

The ICRC asks the question "would a hedging strategy change in the situation where the effective price of renewable energy paid by that retailer is determined under a scheme that sets a contract price that the generator receives?"<sup>4</sup> The hedging strategy of an efficient retailer will not change due to the increase in use of 'contract for difference' payments associated with the ACT Government's LRES (large scale renewable energy scheme).

The 'contract for difference' is a transfer payment from ActewAGL Distribution (AAD), collected via electricity distribution charges, paid to generators to incentivise

---

<sup>2</sup> AEMC 2013, Advice on Best Practice Retail Price Methodology, Final Report, September p.3

<sup>3</sup> AAR continues to disagree with the uplift factor used in the model as noted in AAR Response to Issues Paper November 2016 p.8-9

<sup>4</sup> ICRC 2017 Draft Report p.19

investment in renewable energy generation by guaranteeing them a fixed return. Retailers' hedge volumes are not reduced by LRES because no physical electricity is exchanged via the difference payments; these payments are made in exchange for renewable energy certificates only. Renewable generators in the scheme are paid for their physical electricity dispatched into the national electricity market at prevailing spot market prices just like non-renewable generators<sup>5</sup>. Volatility in the spot market is not reduced by the generation type being renewable instead of gas or coal generation. Retailers continue to hedge their entire load against volatility in the price of electricity.

Therefore the ACT LRES has no impact on AAR's hedging strategy and associated costs and so there would be no basis to change the energy purchase cost model.

### 3.2 Retail Margin

AAR is concerned that the ICRC's proposed new approach to calculating the retail margin in the draft report does not have any supporting evidence, is without any regulatory precedent and fails to compensate for the costs of an efficient retailer. While AAR recognises that the wholesale cost of electricity must impact retail electricity prices, these movements are outside AAR's control. It would be inappropriate for the ICRC to attempt to 'mitigate'<sup>6</sup> these market based costs by making an arbitrary adjustment to the retail margin without providing an economic or empirical justification.<sup>7</sup> This is also not in accordance with the cost recovery principles of the ICRC Act.<sup>8</sup>

The ICRC proposal is to hold the 2016/17 retail margin per MWh constant in real terms for 2017/18. This approach differs from the retail margin calculated as 6.04 per cent of total energy, retail and network costs which the ICRC planned to use for this review as detailed in ICRC's October 2016 Framework and Approach Issues Paper<sup>9</sup> and as used in the ICRC's 2014 decision.

This section sets out the five key reasons why the ICRC approach proposed in the draft is inappropriate:

1. the ICRC's reasoning for implementing this significant change has no justification in its draft report;
2. economic advice from HoustonKemp shows that the ICRC approach is incorrect. It does not reflect the key drivers of changes in the retail margin;
3. it has no empirical basis and does not align with the approach taken by other regulators for the retail margin or the AEMC's guideline in making retail price decisions;

---

<sup>5</sup> Renewable generators also receive or pay the 'contract of difference' that together with the spot market price sums to the contracted feed in tariff.

<sup>6</sup> ICRC 2017 Draft Report p.xv

<sup>7</sup> In the 2014 decision the ICRC continued to maintain the margin approach using 6.04% when the EPC was higher than the EPC in the current Draft Report. See ICRC 13 June 2014 Final Report Standing offer electricity prices from 1 July 2014, p.51 and 58.

<sup>8</sup> The Federal Treasurer has requested the Australian Competition and Consumer Commission (ACCC) to inquire into the sufficiency of the retail margin in the energy sector.

<sup>9</sup> ICRC 2016, Standing Offer Prices for the Supply of Electricity to Small Customers from 1 July 2017, Issues Paper: Framework and Approach, October, p.15.

4. continuing with the proposed approach in the ICRC's final decision would not appropriately compensate AAR for risks; and
5. the ICRC's proposed approach does not comply with the pricing objectives and principles set out in the ICRC Act.

Firstly, the proposal is concerning because of the significant impact it will have on AAR's margin and there is no justification for implementing the proposed change. The impact of this proposed change, based on the estimates used in the Draft Report, is to reduce the effective margin from 6.04 per cent to 5.49 per cent in 2017/18. This is equivalent to reducing the margin in dollar terms from \$11.95 to \$10.86 per MWh<sup>10</sup>. The impact will be substantially larger by the time of the final report (which will be based on data up to 31 May 2017) when the effective retail margin will likely fall to 5.1 per cent for 2017/18 and is likely to continue to decline to 4.1 per cent or lower by 2018/19.

Secondly, the economic advice from HoustonKemp shows that the ICRC's reasoning is incorrect, as the ICRC's proposed new approach fails to reflect the drivers of the costs recovered from the retail margin.

The reason provided by the ICRC for changing the approach to the margin:

“the energy purchase costs and the national renewable energy costs are increasing at rates in excess of CPI or operating costs generally in the economy. If the current approach to allowing for a retail margin is applied, it seems most likely that ActewAGL Retail would receive too high a profit allowance from the regulated retail electricity price.”<sup>11</sup>

As set out in the HoustonKemp report, the retail margin recovers costs that are not recovered elsewhere within the pricing methodology. These include the following costs:

- **the working capital requirements of the retailer**, which is generally defined as the difference between a retailer's current assets and current liabilities and arise due to a timing difference between accounts receivables and accounts payable. These costs are a function of the retailer's total sales and total costs, the average collection days for accounts receivable and average payment days for accounts payable and the rate of return on assets. These costs are not related to changes in CPI;
- **the amortisation of intangible assets**, which is primarily the value of the customer base and may also include patents, copyrights, goodwill and brand values. It can be estimated by observing the cost to acquire a retail energy business amortised over the period that the customer base is expected to be retained by the retailer. The amortised cost of the customer base is not related to changes in CPI;

<sup>10</sup> This is well below the margin of \$11.62 per MWh estimated by SFG Consulting in 2013 for a representative retailer, see SFG Consulting, 2013, Estimation of the regulated profit margin for electricity retailers in New South Wales, June, p.2

<sup>11</sup> ICRC 2017, Standing Offer Prices for the Supply of Electricity to Small Customers from 1 July 2017, Draft Report, p 39-40.

- **the depreciation of tangible assets**, which is the billing and IT systems which are depreciated over the economic lives of the assets. This is not included in the retail operating costs. Regardless of the depreciation profile used, depreciation expenses are unrelated to changes in CPI; and
- **the return on assets**, which include interest, profit and tax expenses, is dependent on the systematic risks of the net cash flows. There is no basis for concluding that a retailer's systematic risks are aligned with CPI changes.

As HoustonKemp explains, none of the above cost components of the retail margin move in line with the CPI of electricity volumes.

Thirdly, in contrast to previous decisions, the ICRC's proposed approach has no empirical basis. In its 2014 final decision, the ICRC relied on a study undertaken by SFG Consulting for IPART<sup>12</sup>. SFG used three methodologies to estimate the retail margin as set out in the HoustonKemp report<sup>13</sup>. The average of the three SFG methods is a margin of 5.7 per cent (or 6.04 per cent if applied on an ex-ante basis as done by the ICRC).

Each of the SFG methodologies calculates the retail margin as a function of total sales and none of the methodologies provide any evidence that margins are aligned with movements in CPI. While SFG calculated the corresponding margins in terms of dollars per MWh, it clearly intended for the margins to be applied in percentage terms, as it considered and rejected the alternative approach now being proposed by the ICRC:

“An alternative approach is to hold a dollar margin constant or have it escalating at a growth rate, such as consumer price inflation. If estimation error is in proportion to costs, this alternative approach would expose retail businesses to increased risk over time that the margin is insufficient to cover their costs.”<sup>14</sup>

Consequently, the application of the SFG analysis by IPART and the ICRC until this draft report, has been with respect to total sales or total costs. This maintains the link between the retail margin and the cash flows of the retailer as estimated by SFG. As shown in the HoustonKemp report, all regulators have adopted this methodology when setting the retail margin.<sup>15</sup> For example, as recognised by IPART:

“One consequence of setting the retail margin as a fixed proportion of costs is that the retail margin allowance (expressed as a dollar amount) increases whenever energy, retail and network costs increase.”<sup>16</sup>

Similarly, as noted by QCA:

“Conceptually, we consider it reasonable to assume that variable retail costs (including the required margin) would increase as underlying costs increase.

<sup>12</sup> SFG 2013, Estimation of the regulated profit margin for electricity retailers in New South Wales, June.

<sup>13</sup> HoustonKemp 2017 p.15-17

<sup>14</sup> SFG Consulting 2012, Methodology for estimating retail electricity margins, Draft Report, October, p.2.

<sup>15</sup> HoustonKemp 2017 Implications of the ICRC's changed approach to the retail margin p.17-18.

<sup>16</sup> IPART 2013, Review of regulated retail prices and charges for electricity, Final Report, June, p.96.

This is because retailers face greater risk as underlying costs (and customer bills) increase – retailers should be compensated for this additional risk.”<sup>17</sup>

In contrast, the ICRC’s proposed approach in the Draft Report is to break the link between the retail margin and cash flows by keeping the dollar value of the retail margin constant in real terms. The result of this approach is a retail margin in percentage terms that can vary substantially over time. Unlike the extensive analysis undertaken by SFG, there is no empirical basis to support the varying percentages that result under the ICRC’s proposed approach.

Further, the ICRC has failed to follow the approach for setting the retail margin that the AEMC recommended in its best practice methodology. The AEMC state that:

“The retail margin represents the return that a retailer requires to attract sufficient capital in order to finance the ongoing operation of its business. This includes compensation for both the capital associated with the business, and the risks associated with the investment.”<sup>18</sup>

The HoustonKemp report concludes that the draft decision is inconsistent with the AEMC’s best practice advice in so far as its decision on the retail margin because:

- “the draft decision on the retail margin is not supported by any estimation technique, nor any financial modelling, market data or other evidence;
- the decision does not rely on any analysis of the required retail margin for a benchmark retailer in the circumstances of ActewAGL Retail, and so the draft decision does not reflect the current best practice estimation techniques; and
- the draft decision to maintain the real per MWh retail margin was made without any regard to current financial market conditions, and furthermore, the approach is incapable of incorporating information on the prevailing retail margin costs.”<sup>19</sup>

Fourth, continuing with the proposed approach in the ICRC’s final decision would not appropriately compensate AAR for:

- the reduction of the cash flow which is required to manage daily operations of receivables and payables;
- amortisation of intangible assets;
- allowance for depreciation of tangible assets;
- a the return on assets that is well below the margin for other retailers in Australia<sup>20</sup>; and
- costs not otherwise included in the cost-index model..

---

<sup>17</sup> QCA 2016, Regulated retail electricity prices for 2016-17, May, p.119.

<sup>18</sup> AEMC 2013, Advice on best practice retail price methodology, Final Report, September, p.64. and HoustonKemp 2017 p.3

<sup>19</sup> HoustonKemp 2017 p.19

<sup>20</sup> SFG Consulting 2013 p.19-22

Fifth, the ICRC's approach is inconsistent with the ICRC Act. When making price directions, the ICRC must observe the overarching objective and the price direction considerations. This is the first electricity review where the ICRC is required to meet the newly legislated overarching objective:

“The objective of the ICRC, when making a price direction in a regulated industry, is to promote the efficient investment in, and efficient operation and use of regulated services for the long term interest of consumers in relation to the price, quality, safety, reliability and security of the service.”<sup>21</sup>

In addition, clause 20 of the ICRC Act requires the ICRC to have regard to the following cost recovery principles, amongst other considerations:

- an appropriate rate of return on any investment in the regulated industry;
- the cost of providing the regulated services; and
- the borrowing, capital and cash flow requirements of people providing regulated services and the need to renew or increase relevant assets in the regulated industry.

In identifying this proposed change to its method, the ICRC has not provided any analysis of the costs that must be recovered from the retail margin or the factors driving those costs. As a result, the ICRC cannot conclude that its proposed approach to calculating the retail margin is consistent with the cost recovery principles in the ICRC Act.

AAR urges the ICRC to retain the approach for the retail margin used in previous decisions, an approach based on empirical analysis and consistent with best practice regulation.

### 3.2 Retail Operating Costs

The ICRC states that the retail operating cost (ROC) already includes an allowance for the customer acquisition and retention costs. AAR disagrees with this statement. The ICRC has not explained why the ICRC has previously (and continues to) set the ROC so much lower than in other Australian jurisdictions.

The ICRC's draft report states:

“as part of the 2014 review, the 2003 allowance was further increased to match New South Wales' Independent Pricing and Regulatory Tribunal (IPART) benchmark. The 2014 revisions also included an ongoing adjustment in the per customer allowance each year by the change in the CPI. This suggests that the Commission via its allowed retail operating cost structure is currently allowing retailers to recover relevant costs relating to customer acquisition and retention.”<sup>22</sup>

IPART's 2013 decision for the Standard Retailer's efficient retail operating costs in NSW was \$110 per customer (in \$2012/13) calculated as the mid-point of a range

---

<sup>21</sup> ICRC Act, Part 4 19L Objective p.27

<sup>22</sup> ICRC 2017 Draft Report p.32

based on information submitted to IPART by retailers.<sup>23</sup> IPART's 2013 decision provided for an additional separate allowance for CARC.<sup>24</sup>

The ICRC's 2014 decision adopted the IPART value of \$110 indexed to \$2014/15 value without adopting the separate additional CARC.<sup>25</sup> The shortfall in the ICRC's ROC allowance for the ACT is confirmed by comparing it with the ROCs provided to other retailers in Australia. The ICRC has set the lowest ROC per customer in Australia (see Attachment 2). Generally the expectation would be for the ACT to receive a comparatively higher per customer ROC allowance to recover fixed costs over the ACT's relatively small scale customer base.

### 3.3 Other Model Components

In relation to other model components, AAR supports the ICRC's proposed approach as set out below.

- Network costs are comprised of distribution charges, transmission charges as well as jurisdictional charges (including FiT). AAR supports the ICRC's proposed approach to updating networks costs when approved by the AER.

AAR also notes that the ongoing Federal Court decision on electricity distribution is likely to impact network costs during the next regulatory period. A rule change has been proposed by ActewAGL Distribution to smooth the resulting changes in network costs over time to manage impacts on retail customers. The rule change process is currently underway with the AEMC and a draft determination was released on 26 April 2017<sup>26</sup>.

- AAR supports the ongoing use of the ICRC's method for estimating LRET and SRES costs, in accordance with the Draft Report<sup>27</sup>.
- AAR supports the ICRC's approach to calculating the cost allowance for energy losses, however, notes that the reference for the marginal loss factor for 2017/18 will need to be updated to reflect the new virtual transmission node for the ACT.

AEMO no longer publishes marginal loss factors for Canberra under transmission node ACA1, but rather references all physical transmission points into the ACT through the virtual transmission node (AAVT)<sup>28</sup>. This change has been approved by the AER and will apply to wholesale costs for the ACT from 1 July 2017.

AAR supports the use of AAVT as the logical replacement for ACA1 in the ICRC's model for the period 2017/18 going forward.

<sup>23</sup> IPART 2013 Review of regulated retail prices and charges for electricity p.98

<sup>24</sup> IPART 2013 Ibid p. 119

<sup>25</sup> ICRC 2014 Standing offer electricity prices from 1 July 2014 Final Report p.54

<sup>26</sup> <http://www.aemc.gov.au/Rule-Changes/Participant-derogation-ACT-DNSP-Revenue-Smoothing>

<sup>27</sup> As noted by the ICRC in the Draft Report, the full details of the approach can be found in the ICRC's 2014 Draft and Final Reports on Standing offer prices for the supply of electricity to small customers.

<sup>28</sup> National Electricity Market 2017, Regions and Marginal Loss Factors: FY 2017-18, March, p.19, Table 7.

- AAR supports the ICRC's approach of applying a CPI adjustment to energy contracting costs and the National Electricity Market fees.
- AAR agrees with the ICRC approach to pass through the costs of the Energy Efficient Improvement Scheme (EEIS).

## 4 Pass Through Arrangements

### 4.2 Power of Choice Pass Through Event

As foreshadowed in previous submissions to the ICRC in 2015 and 2016,<sup>29</sup> AAR will incur legitimate costs in order to comply with new regulatory changes from the Power of Choice package of rule changes<sup>30</sup> and associated procedural changes.<sup>31</sup>

In preparation for the metering rule changes to the National Electricity Retail Rules that come into effect on 1 December 2017<sup>32</sup>, there have been recent amendments to the National Electricity Rules<sup>33</sup> and the electricity Consumer Administration and Transfer Solution and Business to Business framework<sup>34</sup>.

The key impacts to the retail business include the:

- Introduction of new obligations for AAR that have traditionally been managed by DNSPs which require process and system updates for AAR to maintain regulatory compliance (eg. Metering Faults, meter exchange, new connection coordination, notification or retailer planned outages);
- Establishment of new operational capabilities to manage Meter Faults and contractual management of Metering Coordinators;
- Requirement for AAR to obtain a smart metering capability (via a metering coordinator) by 1 December 2017; and
- Changes to CATS and B2B procedures to support changes to rules and the introduction of smart meters and their remote services.

In order to meet the timeframes for compliance with the Power of Choice regulatory obligations, AAR is required to complete the following tasks before 1 December 2017:

- Finalise metering coordinator (MC) strategy (strategic approach to market and requirements for MC products and services)
- Design, Build and Test required system changes
- Undertake negotiations with MCs and complete System Integration Testing
- Participate in the Australian Energy Market Operator (AEMO) Industry Testing

<sup>29</sup> ActewAGL Retail May 2015 Standing offer prices for the supply of electricity to small customers 1 July 2015 to 30 June 2016 p.8, ActewAGL Retail May 2016 Standing offer prices for the supply of electricity to small customers 1 July 2016 to 30 June 2017 p. 13-15 and ActewAGL Retail November 2016, Response to Issues Paper Framework and Approach from the Independent Competition and Regulatory ICRC p.15-9.

<sup>30</sup> <http://www.aemc.gov.au/Major-Pages/Power-of-choice>

<sup>31</sup> AEMO, March 2017, Power of Choice Procedure Changes (B2B Procedures) Final Report and Determination

<sup>32</sup> AEMC 2015 Expanding Competition in Metering and Related Services

<sup>33</sup> National Electricity Amendment (Embedded Networks) Rule 2015

<sup>34</sup> National Electricity Amendment (Updating the Electricity B2B Framework) Rule 2016 No.6

The costs budgeted to meet the IT system readiness requirements to comply with the National Electricity Law and Rules are significant (and can be supplied separately in confidence to the ICRC). They will predominately be incurred between July 2017 and December 2017. Upon completion of the IT system changes, AAR can provide details of the actual costs expended in order to facilitate the pass through of costs in 2018/19 pricing.

The costs to be incurred by AAR do not include the replacement or purchase of smart meter devices as suggested in the ICRC Draft Report.<sup>35</sup>

### 4.3 Proposed Change to the Dates for a Regulatory Change Event

The ICRC has changed the dates in Clause 9.5 of the ICRC proposed Price Direction for regulatory change events to state that “a decision must be made on or after 31 May 2017 and before 30 June 2020.”<sup>36</sup> Although this regulatory change event was included in the National Electricity Rules in November 2015, the subordinate procedural regulations were not finalised until March 2017. This meant that there was no basis upon which to prepare a forecast of costs until recently.

The proposed Price Direction should not prevent AAR recovering efficiently incurred costs, including those associated with meeting its Power of Choice obligations. Therefore, to remove any uncertainty in the proposed drafting, the 31 May 2017 date should be removed from Clause 9.5 of the proposed Price Direction.

The Power of Choice costs should be allowed to be recovered during the 2017-2020 regulatory control period:

- these costs arise due to the changes to the National Electricity Retail Rules and regulation and are therefore a regulatory change event;
- AAR has foreshadowed that these costs will be incurred by AAR in a number of previous submissions, including initiating an application in May 2016;
- due to the ongoing nature of this regulatory change event, the forecast costs could not be quantified earlier;
- no other opportunity has arisen for AAR to recover these costs earlier due to delays in finalising the regulations; and
- the costs are scheduled to be incurred in 2017/18, that is within the regulatory review period.

The proposed Price Direction should also be adjusted to allow a pass-through event to be included in the first year of the regulatory period. This would clarify the mechanism for recovery of costs associated with a regulatory change event that occurs in the last year of the previous regulatory period.

The above two changes would make the proposed Price Direction consistent with the Price Direction considerations in the ICRC Act requiring the ICRC to have

---

<sup>35</sup> ICRC 2017 Draft Report p.10-11

<sup>36</sup> ICRC 2017 Proposed Price Direction Standing offer prices for the supply of electricity to small customers 1 July 2017 to 30 June 2020, clause 9.5 p.10

regard to government regulatory obligations.<sup>37</sup> It is also consistent with the Minister's terms of reference for this review for requiring that "the ICRC must consider the direct impact on electricity costs of government policies and pass through of costs and savings to regulated prices".<sup>38</sup>

---

<sup>37</sup> ICRC Act 2016, 20(2) k) p.28

<sup>38</sup> Andrew Barr 22 June 2016 Terms of Reference Determination 2016 p.2

## 5 Annual Recalibration

AAR supports most aspects of the ICRC approach to annual recalibration which will occur in 2018/19 and 2019/20 within the next regulatory control period.

Table 4.1 in the Draft Report<sup>39</sup> which describes the approach to re-calibration for each cost component contains some inaccuracies in describing the approach used by the ICRC to date. These are:

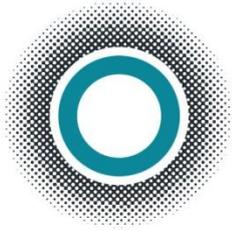
- Retail operating cost (ROC) recalibration is described as taking the previous year's value and adjusting it for the change in CPI. More accurately the approach used is to index the per customer ROC by CPI and then convert this to a ROC per MWh.
- The EEIS is recalibrated each year by using actual costs to adjust the forecast used in the previous year's pricing and providing a forecast for the upcoming year.

---

<sup>39</sup> ICRC 2017, Standing offer prices for the supply of electricity to small customers from 1 July 2017, Draft report, March, p64.

**Attachment 1**

HoustonKemp Economists, 2017, “Implications of the ICRC’s changed approach to the retail margin”, 27 April 2017.



**HOUSTONKEMP**  
Economists

# Implications of the ICRC's changed approach to the retail margin

---

Report for ActewAGL Retail

27 April 2017

## Report Author/s

Brendan Quach

Ann Whitfield

---

## Contact Us

### Sydney

Level 40  
161 Castlereagh Street  
Sydney NSW 2000

Phone: +61 2 8880 4800

### Singapore

8 Marina View  
#15-10 Asia Square Tower 1  
Singapore 018960

Phone: +65 6817 5010

## Disclaimer

This report is for the exclusive use of the HoustonKemp client named herein. There are no third party beneficiaries with respect to this report, and HoustonKemp does not accept any liability to any third party. Information furnished by others, upon which all or portions of this report are based, is believed to be reliable but has not been independently verified, unless otherwise expressly indicated. Public information and industry and statistical data are from sources we deem to be reliable; however, we make no representation as to the accuracy or completeness of such information. The opinions expressed in this report are valid only for the purpose stated herein and as of the date of this report. No obligations is assumed to revise this report to reflect changes, events or conditions, which occur subsequent to the date hereof. All decisions in connection with the implementation or use of advice or recommendations contained in this report are the sole responsibility of the client.

# Contents

---

1.	Introduction and summary	1
1.1	Summary of findings	1
1.2	Structure of this report	2
2.	Context	3
2.1	The AEMC's advice on best practice methodology	3
2.2	Independent Pricing and Regulatory Tribunal 2013-16 decision	4
2.3	Queensland Competition Authority 2016-17 determination	5
2.4	ICRC 2014 final decision	6
2.5	ICRC 2017 draft decision	7
3.	The ICRC draft decision is based on an incorrect premise	9
3.1	Costs to be compensated via the retail margin	9
3.2	Changes in the costs recovered via the retail margin are not correlated with changes in the CPI	10
3.3	The ICRC's proposed approach therefore fails to have sufficient regard to the cost recovery requirements in the ICRC Act	13
4.	The ICRC approach has no empirical support	15
4.1	The SFG Consulting analysis underpinning the earlier retail margin was predicated on the retail margin being a percentage of total sales	15
4.2	The ICRC methodology is out of step with the approach adopted by other jurisdictional regulators	17

## Figure

---

Figure 1: The ICRC's small customer pricing model 2014-17	6
Figure 2: ICRC's proposed costs components for 2017-18 (per MWh)	7
Figure 3: Cost components compensated by the retail margin	10

## Tables

---

Table 1: Approach adopted by other regulators to setting the retail margin	18
--	----



# 1. Introduction and summary

---

This report has been prepared at the request of ActewAGL Retail. The context of our report is the draft decision made by the Independent Competition and Regulatory Commission (ICRC) on standing offer prices for the supply of electricity to small customers from 1 July 2017.<sup>1</sup> Specifically ActewAGL Retail has asked HoustonKemp to assess the adequacy of the ICRC's draft decision to change the methodology for determining the retail margin, in light of the factors that may be expected to affect the costs recovered by the margin, the rationale provided by the ICRC and the approach adopted by other regulators.

The ICRC's draft decision proposes to maintain the real dollar value of the 2016-17 retail margin in per MWh terms. This contrasts with the approach previously adopted by the ICRC whereby the retail margin was calculated as a fixed percentage of total costs excluding the retail margin allowance, and so under which the resulting per MWh retail margin would fluctuate with changes in wholesale energy costs, network costs and retail costs.

The ICRC's proposed change in approach results in a decrease in the retail margin allowed for ActewAGL Retail from the 6.04 per cent allowed in the ICRC's previous decision to 5.49 per cent (in ex-ante terms).

## 1.1 Summary of findings

Our key findings can be summarised as follows:

- the only justification provided by the ICRC in the draft decision for its proposed change in approach to calculating the retail margin allowance is the unsupported assertion that the components of the retail margin are likely to move broadly in line with changes in the Consumer Price Index (CPI).
- the draft decision on the retail margin is not supported by any economic rationale, nor any financial modelling, market data or other evidence, which is inconsistent with the Australian Energy Market Commission (AEMC)'s 2013 Best Practice Methodology for estimating the retail margin.
- we find that there is no basis for concluding that the costs recovered via the retail margin are increasing broadly in line with the increase in CPI. Our analysis of the costs recovered by the retail margin instead finds that:
  - > the retailer's working capital costs are directly related to the total revenues and expenses of the business, which will reflect changes in wholesale energy costs;
  - > the value of the customer asset base (a retailer's key intangible asset) is primarily linked to customer numbers and the expected retention period for customers;
  - > the depreciation of a retailer's tangible assets, such as billing and IT systems, is unlikely to change in line with CPI, as competitive businesses do not maintain indexed asset values and instead generally depreciate assets on a straight line (nominal) basis or a declining balance approach; and
  - > the return on capital is linked to the systematic risk of the retailer's cash flows and changes in financial market conditions, which are not expected to be correlated with changes in CPI.
- the ICRC's proposal to fix the real per MWh value of the retail margin exposes ActewAGL Retail to the possibility that it will not recover its costs, given the expected increase in its cashflows over the 2017-20 period:
  - > the ICRC's failure to explicitly examine the cost drivers relating to the various elements of the retail margin is in contravention to the requirements in the ICRC Act for it to have regard to the cost of

---

<sup>1</sup> ICRC, *Standing offer prices for the supply of electricity to small customers from 1 July 2017 | Draft report (the "draft decision")*, March 2017.

providing the regulated service, as well as an appropriate rate of return and the cash flow requirements of the business.

- further, the ICRC's draft decision to break the link between the retail margin and the cash flows of the retailer results in the 2017-20 retail margin no longer being supported by any empirical foundation:
  - > the ICRC's 2014 decision ultimately relied on the results of an SFG Consulting study commissioned by IPART to justify the retail margin allowance for ActewAGL Retail;
  - > each of the approaches adopted by SFG Consulting in its study estimated the retail margin as a percentage of total sales. The analysis therefore only provides evidence of the retail margin as a percentage of sales of a benchmark efficient retailer, and so is inconsistent with the ICRC's assumption in the draft decision that these costs are constant in real dollar per MWh terms;<sup>2</sup> and
  - > as a result, the draft decision to provide a retail margin of 5.49% in 2017-18 is no longer supported by the SFG Consulting analysis.
- we also find that the ICRC's approach in the draft decision is an outlier, with all other jurisdictional regulators that continue to regulate retail energy prices effectively providing a retail margin as a percentage of the retailer's total costs.
  - > this approach is a deliberate decision by other regulators with, for example, the QCA stating that:<sup>3</sup>

Conceptually, we consider it reasonable to assume that variable retail costs (including the required margin) would increase as underlying costs increase. This is because retailers face greater risk as underlying costs (and customer bills) increase—retailers should be compensated for this additional risk.

## 1.2 Structure of this report

The remainder of our report is structured as follows:

- section 2 sets out the context for this report and summarises decisions by jurisdictional regulators on the retail margin component of regulated electricity tariffs, including the ICRC's 2014 decision and its recent 2017 draft decision;
- section 3 sets out the cost components that are intended to be recovered by the retail margin in the context of the ICRC's draft decision and highlights that changes in the costs of each of these elements are not expected to be correlated with changes in CPI, and
- section 4 identifies that the ICRC's proposed 2017-20 retail margin is no longer supported by any empirical analysis, and that the ICRC's approach is inconsistent with that adopted by all other regulators.

<sup>2</sup> We note that the SFG report translates its estimate of the retail margin of 5.7 per cent into both a \$/customer (\$125/customer) and a \$/MWh (\$11.62/MWh) amount. However, these values have been derived from the percentage estimate and the assumed costs of a benchmark retailer in 2013 and the translation is only valid for that point in time.

<sup>3</sup> QCA, *Regulated retail electricity prices for 2016-17 | Final determination*, May 2016, p. 119.

## 2. Context

Regulators in NSW, Queensland, Tasmania and the ACT currently determine the maximum price for energy customers on default (non-competitive) retail tariffs. Of these regulators, only IPART (the NSW regulator) and the Queensland Competition Authority (QCA) have undertaken detailed analysis of the appropriate retail margin for a benchmark efficient retailer.<sup>4</sup>

This section summarises:

- the advice from the Australian Energy Markets Commission (AEMC) on the best practice for establishing the appropriate retail margin;
- the analysis undertaken by IPART and the QCA in estimating an appropriate retail margin; and
- the approach adopted by the ICRC to establishing the retail margin in 2014 and in its current draft decision.

### 2.1 The AEMC's advice on best practice methodology

In 2013 the AEMC was asked by the then Standing Council on Energy and Resources (SCER)<sup>5</sup> to provide advice on the best practice methodology for setting regulated retail energy prices. The AEMC published its advice in September 2013.

By articulating a stable and clear objective for retail price regulation, the AEMC stated that it aimed to assist regulators in making subsequent decisions about how retail energy prices should be regulated. The AEMC expressed the view that, where a regulated retail price is maintained, a stable regulatory framework and method is important for the effective operation of the competitive wholesale and retail sectors.

As part of its advice, the AEMC describes the role of the retail margin as follows:<sup>6</sup>

The retail margin represents the return that a retailer requires to attract sufficient capital in order to finance the ongoing operation of its business. This includes compensation for both the capital associated with the business, and the risks associated with the investment.

The AEMC did not prescribe a method for setting the retail margin in its advice. Instead it provided:

- an objective for calculating the retail margin, ie:<sup>7</sup>

The retail margin is to be commensurate with the efficient financing costs of a benchmark efficient entity with a similar degree of risk as that which applies to the retailer in respect of the provision of regulated electricity services.
- and
- a series of high level principles that jurisdictional regulators should have regard to in making their decision on the retail margin, specifically:<sup>8</sup>
    - a range of estimation methods, financial models, market data and other evidence should be considered;
    - the retail margin should be capable of responding to changes in market conditions; and

<sup>4</sup> The regulators in both Tasmania and the ACT have to date relied on estimates of the retail margin adopted by other regulators, rather than commissioning their own analysis.

<sup>5</sup> Now the COAG Energy Council.

<sup>6</sup> AEMC 2013, *Advice on best practice retail price methodology, Final Report*, 27 September 2013, p. 64

<sup>7</sup> *Ibid*, p. 68.

<sup>8</sup> *Ibid*, p. 69.

- any interrelationships between estimates of financial parameters that are relevant to the estimates of the return on equity and return on debt should be considered.

This objective and the high level principles implicitly endorse the approach taken by IPART to setting the retail margin in its various determinations on regulated energy prices, which:

- had regard to three independent methods for estimating the retail margin of a benchmark retailer;
- included parameters that had been specified using prevailing financial market data; and
- coherently managed the interrelationship between related parameters - for example IPART specified a weighted average cost of capital that rationally managed the interrelationship between debt and equity.

IPART's approach is discussed below.

## 2.2 Independent Pricing and Regulatory Tribunal 2013-16 decision

IPART currently regulates the retail prices for the supply of natural gas to small customers and, until 1 July 2014, also regulated the retail price for (non-competitive) retail electricity customers.<sup>9</sup>

IPART has adopted a common approach to estimating the retail margin for both electricity and gas retail price regulation. This approach relies on analysis in expert reports provided by SFG Consulting. In both cases IPART applies the retail margin to the value of the retailer's total sales.

IPART's analysis of the appropriate retail margin for a benchmark retailer is of particular importance since the ICRC relied on the research undertaken for IPART by SFG Consulting to determine the appropriate retail margin to apply to ActewAGL Retail in 2014. It is this value that the ICRC is now proposing to hold constant in real per MWh terms (see section 2.4).

IPART stated in its 2013 determination for electricity that the retail margin must compensate retailers for the systematic risks they face in providing regulated retailing services. These systematic risks include:<sup>10</sup>

- The risk of variation in the regulated load profile (ie, that the actual regulated load profile is different to that assumed in setting regulated tariffs, but still within the normal range). The variation attributed to economic conditions is systematic.
- The risk of variation in wholesale electricity spot and contract prices (ie, that actual wholesale price outcomes are different to those assumed in setting regulated tariffs, but still within the normal range). The variation attributed to economic conditions is systematic.
- General business risk (ie, that actual costs and revenues are different to those assumed in setting regulated tariffs due to factors such as unexpected changes in interest rates or exchange rates, equipment failures, or fraud).

SFG Consulting's report to IPART undertakes three separate approaches to estimating the retail margin for a benchmark retailer. These approaches are:<sup>11</sup>

- the **expected returns approach** that estimates the expected cash flows that an electricity retailer will earn, and determines a retail margin that ensures these expected cash flows compensate the retailer for the systematic risks of those cash flows;
- a **benchmarking study** of a broad class of listed retailers in the United States, United Kingdom, Australia, Canada and New Zealand; and

<sup>9</sup> IPART, *Review of regulated retail prices and charges for gas from 1 July 2016 | Final Report*, June 2016.

<sup>10</sup> IPART, *Review of regulated retail prices and charges for electricity | From 1 July 2013 to 30 June 2016 | Final report*, June 2013, p. 88.

<sup>11</sup> Each of these techniques is discussed in greater detail in section 4.1 of this report.

- a **bottom-up approach** which relies on assumptions of the retailer's asset base as well as forecasts of its operating costs, to compute earnings and revenue which allow the retailer to earn an expected return on assets equal to its estimated cost of capital.

SFG Consulting estimated the retail margin as the ratio of the benchmark retailer's earnings before interest, tax, depreciation and amortisation to sales (EBITDA/sales). This is consistent with the specification of the pricing models used by IPART, and by the ICRC prior to the current draft decision.<sup>12</sup>

IPART states that the bottom-up and expected returns approaches:<sup>13</sup>

did not include an allowance for non-systematic energy purchase risk or customer acquisition costs – these have each been addressed elsewhere in the cost allowances.

... depreciation has not been compensated for in the retail cost allowance but is included as a component of the retail margin, making EBITDA the appropriate comparator.

SFG Consulting's recommended range for the retail margin provided by the three approaches was 5.3 per cent to 6.1 per cent of a retailer's total electricity sales (EBITDA). SFG Consulting's recommended retail margin was the mid-point of this range, ie, 5.7 per cent.<sup>14</sup>

IPART accepted SFG Consulting's recommendation and set a retail margin equal to 5.7 per cent on an ex-post basis (ie, the margin was applied to the retailer's total sales).

## 2.3 Queensland Competition Authority 2016-17 determination

Since 1 July 2016, the QCA only determines regulated retail electricity prices for regional Queensland. Retail electricity prices in south east Queensland were deregulated from 1 July 2016.<sup>15</sup>

Specifically, the QCA estimates a single retailing operating cost (ROC) function that compensates the benchmark retailer for the costs associated with:

- customer administration;
- call centres;
- corporate overheads;
- billing and revenue collection;
- IT systems;
- regulatory compliance; and
- customer acquisition and retention costs (CARC).

In contrast to the ICRC's pricing model, the QCA's ROC cost function covers both retail costs and the retail margin.

The ROC cost function was estimated for the QCA's 2016 determination by ACIL Allen Consulting, using a benchmarking approach that looked at the costs of Australian energy retailers. The ROC cost function contains a fixed and variable component. The QCA comments in its determination that the costs that would normally be recovered via the retail margin are incorporated in the variable component of the ROC

<sup>12</sup> This point is discussed in greater detail in section 2.4 of this report.

<sup>13</sup> IPART, *Retail competition and investment in the NSW electricity industry | Regulated electricity retail tariffs and charges for small customers 2007 to 2010 | Final Report and Final Determination*, June 2007, pp. 108-109.

<sup>14</sup> IPART, *Review of regulated retail prices and charges for electricity | From 1 July 2013 to 30 June 2016 | Final report*, June 2013, p. 94.

<sup>15</sup> QCA, *Regulated retail electricity prices for 2016-17 | Final determination*, May 2016.

function.<sup>16</sup> Relevantly, the QCA highlighted that this treatment means that the retailer continues to be compensated for increases in underlying costs:

... if wholesale energy costs or network charges increased, the variable retail costs would also increase, as it is derived as a percentage of underlying costs. This is consistent with how the retail margin was applied in previous years.

The QCA's stated reason for including the retail margin costs in the variable component of the ROC function was that:<sup>17</sup>

Conceptually, we consider it reasonable to assume that variable retail costs (including the required margin) would increase as underlying costs increase. This is because retailers face greater risk as underlying costs (and customer bills) increase—retailers should be compensated for this additional risk.

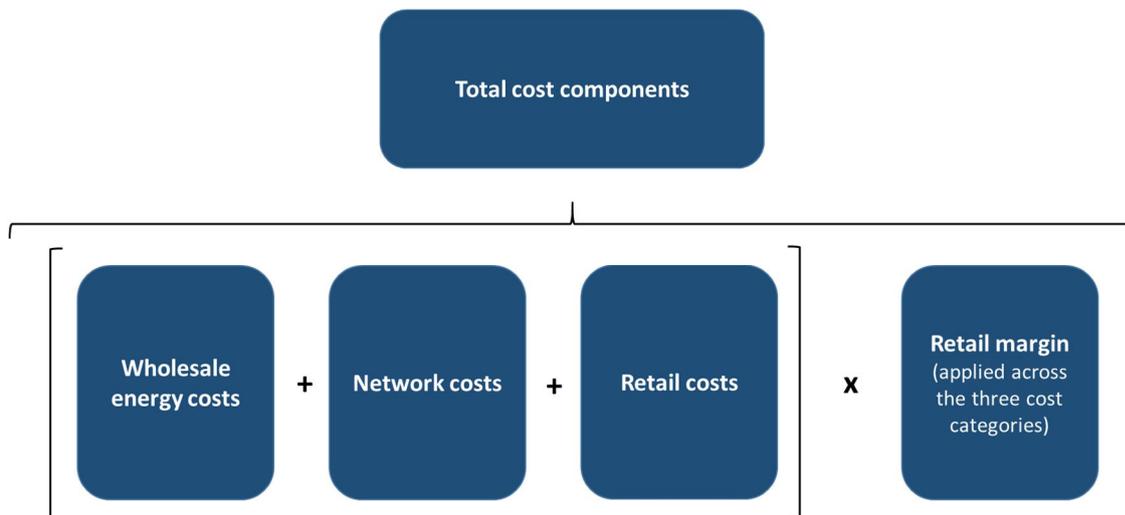
## 2.4 ICRC 2014 final decision

The ICRC in 2014 adopted an approach that was broadly similar to that adopted by IPART in its 2013 decision, which was to apply a percentage retail margin to the sum of the following costs components:

- wholesale energy costs, including energy purchasing costs, Large-Scale Renewable Energy Target (LRET) and Small-Scale Renewable Energy Scheme (SRES) costs, energy losses, energy contracting costs and National Electricity Market fees;
- network costs; and
- retail costs, which include retail operating costs and the costs of the Energy Efficiency Improvement Scheme (EEIS).

This approach is depicted in Figure 1.

Figure 1: The ICRC's small customer pricing model 2014-17



<sup>16</sup> QCA, *Regulated retail electricity prices for 2016-17 | Final determination*, May 2016, p. 119.

<sup>17</sup> QCA, *Regulated retail electricity prices for 2016-17 | Final determination*, May 2016, p. 119.

The ICRC adopted a retail margin of 6.04 per cent (in ex-ante terms), which was equivalent to the 5.7 per cent (ex-post) retail margin determined by IPART. The ICRC justified this approach on the basis of the extensive analysis that underpinned IPART's determination of the retail margin:

The Commission is of the view that it is appropriate to apply the outcomes of the recent extensive analysis undertaken by IPART and SFG to the ACT.<sup>18</sup>

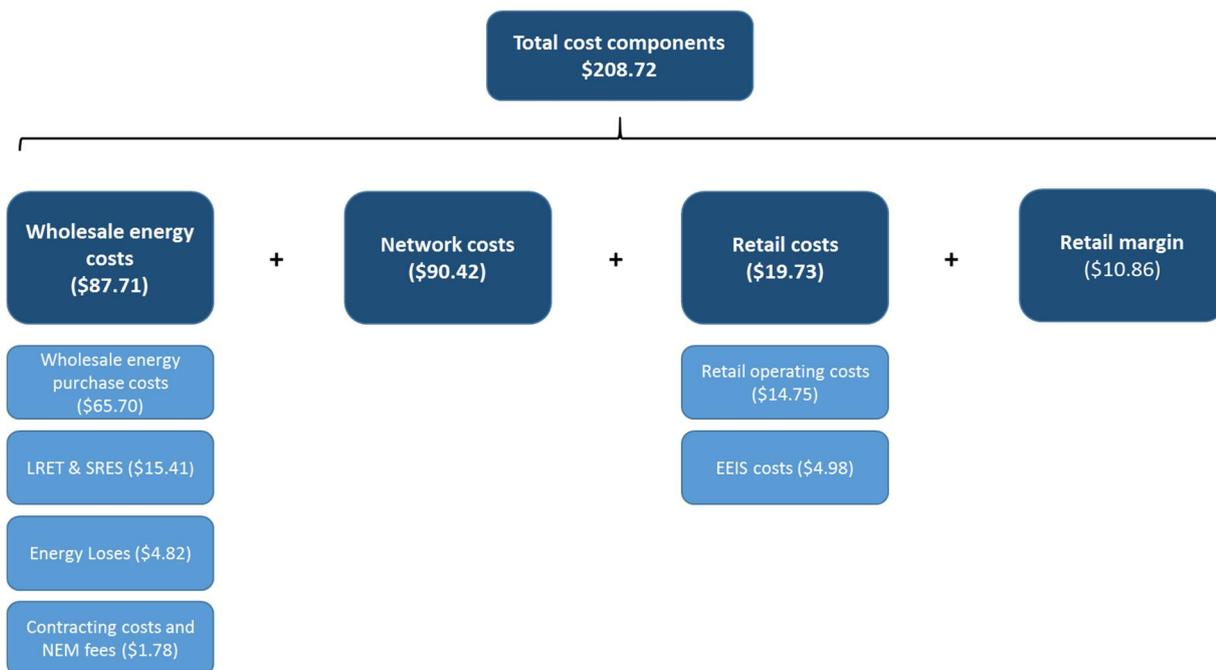
The Commission's final decision is to apply a retail margin of 6.04 per cent in ex ante terms. This is equivalent to a retail margin of 5.7 per cent applied ex post.<sup>19</sup>

We note that an ex-ante percentage retail margin is applied to total costs *excluding* those relating to the retail margin, while an ex-post percentage retail margin is applied to total costs *including* the retail margin.<sup>20</sup>

## 2.5 ICRC 2017 draft decision

The ICRC's 2017 price determination will apply to regulated electricity prices over the period 1 July 2017 to 30 June 2020. Figure 2 sets out the cost components in the ICRC's proposed pricing model for 2017-18.<sup>21</sup>

Figure 2: ICRC's proposed costs components for 2017-18 (per MWh)



The ICRC's recent draft decision proposes to maintain the real value of the dollar per MWh retail margin at the level determined for 2016-17, and to *add* this value to the other cost components in the retail pricing model. This approach represents a substantial departure from the previous approach adopted by the ICRC

<sup>18</sup> ICRC, *Standing offer prices for the supply of electricity to small customers | Draft report*, February 2014, p. 93.

<sup>19</sup> ICRC, *Standing offer prices for the supply of electricity to small customers | Final report*, June 2014, p. 34.

<sup>20</sup> The ICRC's 2014 draft decision expressed the retail margin on the same ex post basis as IPART (ie, a value of 5.7 per cent). However, in its final decision, the ICRC expressed the retail margin in ex ante terms.

<sup>21</sup> The ICRC's proposed pricing model determines the maximum average percentage change that ActewAGL Retail can apply to its suite of regulated electricity tariffs on an annual basis. The maximum average percentage change in tariffs for 2017-18 is computed as the percentage change in the estimated total cost (per MWh) of the supply of electricity to small customers on ActewAGL Retail's regulated tariffs from 2016-17 to 2017-18.

as well as that adopted by all other jurisdictional regulators, which is to calculate and apply the retail margin as a *percentage* of overall retail costs.

The ICRC's rationale for its proposed change in methodology is set out in a single paragraph in its draft determination.<sup>22</sup>

If retail costs and the components of the retail profit margin are actually increasing broadly in line with CPI increases but the margin is applied to a cost base that is increasing at a materially higher rate, then the dollar value of the retail margin will be increasing at a rate that exceeds what is needed to ensure reasonable cost recovery and a reasonable profit margin. In the current circumstances energy purchase costs and national renewable energy costs are increasing at rates well in excess of the CPI or operating costs generally in the economy. If the current approach to allowing for a retail profit margin is applied, it seems most likely that ActewAGL Retail would receive too high a profit allowance from the regulated retail electricity price.

The ICRC's proposed approach is to maintain the real value of the per MWh retail margin going forward. In other words, the proposed approach implicitly assumes that the costs recovered via the retail margin are broadly moving in line with CPI increases and the growth in electricity supplied to standing offer customers.

The ICRC's proposed approach results in a decrease in the retail margin from 6.04 per cent to 5.49 per cent (in ex-ante terms). As a result, the draft decision changes both the methodology for setting the retail margin and the amount of compensation that the ActewAGL Retail would receive for supplying standing offer customers.

---

<sup>22</sup> ICRC, *Draft decision*, March 2017, p. 39.

### 3. The ICRC draft decision is based on an incorrect premise

---

The central tenet underpinning the ICRC's draft decision to change the approach to calculating the retail margin is that:<sup>23</sup>

If retail costs and the components of the retail profit margin are actually increasing broadly in line with CPI increases ...

The ICRC provides no evidence for this assertion, nor any economic rationale or analysis as to why the components of the retail margin may be expected to vary in line with CPI increases.

The remainder of this section:

- sets out the cost components recovered via the retail margin; and
- highlights that movements in these cost components are in fact *uncorrelated* to movements either in CPI or the volume of energy supplied and, in some cases, are more closely correlated with the total costs of the retailer.

The ICRC's proposal to fix the real per MWh value of the retail margin therefore exposes ActewAGL Retail to the very real possibility that it will not recover its costs, given the expected increase in its cashflows over the 2017-20 period. The ICRC's failure to explicitly examine the cost drivers relating to the various elements of the retail margin is in contravention to the requirements in the ICRC Act for it to have regard to the cost of providing the regulated service, as well as an appropriate rate of return and the cash flow requirements of the business.

#### 3.1 Costs to be compensated via the retail margin

The retail margin compensates ActewAGL Retail for costs that are not provided for by the other cost components in the pricing model.

Figure 3 shows the costs recovered via the retail margin.

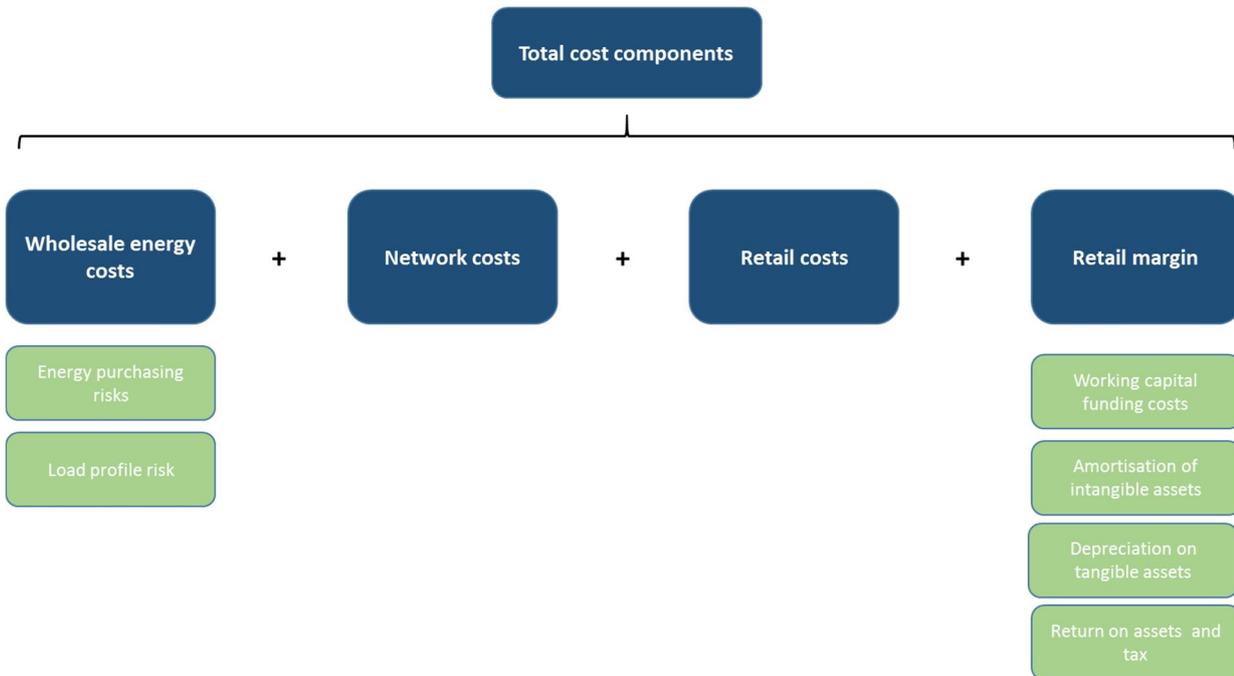
The four main cost components compensated for by the retail margin in the ICRC's model relate to:

- the funding requirement for working capital;
- amortisation of intangible assets, primarily relating to the value of ActewAGL Retail's customer base;
- the depreciation on tangible assets, such as billing and IT systems; and
- a return on assets, which would include any company income taxes and interest costs.

---

<sup>23</sup> ICRC, *Draft decision*, March 2017, pp. 39-40.

Figure 3: Cost components compensated by the retail margin



We note that the ICRC’s approach of compensating for depreciation as part of the retail margin is consistent with that adopted by IPART.

We also note that the ICRC’s approach to estimating wholesale energy costs mitigates some of the risks associated with energy purchasing and load profile risk (which would otherwise need to be compensated for via the retail margin). Again, this is consistent with IPART’s estimation of the retail margin for regulated energy tariffs in NSW, which also does not include an allowance for non-systematic energy purchase risks.<sup>24</sup>

Relevantly, the wholesale pricing model used by the ICRC in its draft decision is essentially the same as the model it adopted for the 2014-15 to 2016-17 period. As a result, the costs to be recovered via the retail margin in the 2017-20 period are commensurate with those estimated by the ICRC in 2014.

### 3.2 Changes in the costs recovered via the retail margin are not correlated with changes in the CPI

Contrary to the ICRC’s assertion, there is no reason to think that all of the cost components of the retail margin move in line either with CPI or the volume of electricity supplied.

Below we discuss the drivers of the various cost components of the retail margin, and find that they are in fact uncorrelated with changes in CPI. Moreover, in the case of working capital, these costs will instead move in line with a retailer’s overall costs.

#### 3.2.1 Working capital requirement

Working capital funding requirements are a cost of conducting business and represent one of the main non-operating costs of an electricity retailer. Working capital is generally defined as the difference between a retailer’s current assets and current liabilities. The need for working capital arises due to a timing difference

<sup>24</sup> IPART, *Retail competition and investment in the NSW electricity industry | Regulated electricity retail tariffs and charges for small customers 2007 to 2010 | Final Report and Final Determination*, June 2007, pp. 108-109.

between accounts receivable (payments received from standing offer customers) and accounts payable (payments made to suppliers such as networks and energy purchasing costs).

Working capital represents a significant cost to a retailer as costs such as wholesale energy purchases must be settled daily, whilst the revenue from small customers is billed in arrears, typically monthly or even quarterly.

The costs associated with a firm's working capital will be a function of:

- the retailer's total sales (ie, accounts receivable) and total costs (ie, accounts payable);
- the average collection days for accounts receivable and average payment days for accounts payable (which will also reflect the level of bad debts); and
- the rate of return on assets.

None of these cost drivers are related to changes in CPI. Rather, there is direct link between a firm's working capital costs and the cash flows of the business. That is, working capital costs will increase proportionally with a rise in a firm's costs (such as an energy purchasing costs and network costs) and its revenues. If a retailer's costs and revenues increased by 20 per cent, other things being equal, its working capital costs would also rise by 20 per cent, and not by the increase in CPI.

Although changes in total electricity volumes can be one driver of changes in cashflows, the value at which energy is purchased and supplied is also a key determinant, and may change even where the total volume of sales stays the same. The combined CPI and electricity volume drivers proposed by the ICRC for the retail margin do not therefore capture the factors that in practice affect a retailer's working capital costs.

### 3.2.2 Amortisation of intangible assets

An intangible asset is an asset that is not physical in nature, and includes assets such as patents, copyrights, goodwill and brand values.

Retail businesses typically have small tangible asset bases, particularly compared to network businesses. The AEMC observed that the primary assets of a retailer are its intangible assets, in the form of its customer base.<sup>25</sup>

This observation is supported by the analysis undertaken by SFG Consulting of acquisitions of Australian energy retailers, which found that these businesses had substantial asset values (up to \$2.3 billion for Origin Energy) with SFG Consulting concluding that retailers have implied values of \$1,141 per customer or \$89 per MWh.<sup>26</sup>

The value of intangible assets is generally not directly observable and therefore must be estimated. One method for estimating the intangible value of a retailer's customer base is to estimate the costs of acquiring new customers. This estimated value is then amortised over the period that the customer is expected to be retained by the retailer.

The cost of acquiring the retailer's customer base are a function of:

- the number of customers of the retailer;
- the costs of acquiring customers;
- the average expected retention period of customers; and
- the rate of return on assets.

<sup>25</sup> AEMC, *Advice on best practice retail price methodology | Final report*, 27 September 2013, p. 66.

<sup>26</sup> SFG Consulting, *Estimation of the regulated profit margin for electricity retailers in New South Wales*, 4 June 2013, p. 25.

The amortised cost of the customer base is not related to changes in CPI and electricity volumes. Instead it is related to the number of customers, and the average retention period for a customer, while changes in acquisition costs are commonly linked to labour prices associated with the costs of call centres.

### 3.2.3 Depreciation of tangible assets

Tangible assets are physical assets that provide a necessary input into the provision of regulated retailing services. Assets are depreciated over their economic life. Depreciation allocates the purchase cost to each year that the asset is used and reflects the reduction in the asset's value. The depreciation expense is not recovered in the retailing operating cost component of the ICRC's pricing model, and so must be compensated for in the retail margin.<sup>27</sup>

An electricity retailer's primary tangible assets relate to its IT and billing systems. While there are many approaches to determining the depreciation expense, the most common methods are:

- nominal straight line approach – where the annual depreciation expense is calculated by dividing the purchase costs by the number of years that the asset is expected to be used; or
- a declining balance – where the annual depreciation expense is calculated by multiplying the remaining asset value by a fixed percentage.

Both these methods comply with the requirements for determining a depreciation expense for tax purposes.<sup>28</sup>

Under both of these approaches, the resulting depreciation allowance is unrelated to changes in the CPI and electricity volumes.

We note that a common depreciation approach applied to Australian regulated assets is real straight line depreciation applied to an indexed asset base. However, we understand that this is not a common method for determining the depreciation expense for competitive firms. Moreover, even under this approach the depreciation allowance would not rise in line with CPI.<sup>29</sup>

### 3.2.4 Return on assets

A firm needs to earn a return on assets to incentivise it to invest in the assets necessary to provide regulated electricity services. Since debt and equity finance is normally used to finance investments, the return on assets must be sufficient to cover:

- the interest costs on any debt financing (ie, a return on debt);
- the profits payable to equity financing (ie, a return on equity); and
- any associated company income tax costs, necessarily incurred to provide a return on equity.<sup>30</sup>

The return on assets will be a function of both the value of assets and the rate of return.

According to the theory of the capital asset pricing model (CAPM), the rate of return compensates a business for bearing systematic risks. IPART in its 2010 draft methodology report identified the following three risks that may have systematic components which need to be compensated for in the retail margin:<sup>31</sup>

<sup>27</sup> As noted earlier, this is consistent with the approach adopted by IPART.

<sup>28</sup> See ATO, Guide to depreciating assets 2016 (NAT 1996), June 2016.

<sup>29</sup> Net regulatory depreciation (ie, real straight line depreciation less the indexation of the asset base) rises at a rate substantially greater than CPI, as the indexation component falls through time (whilst the real straight line depreciation is constant in real terms).

<sup>30</sup> We note that in regulated infrastructure sector company income tax costs are commonly reduced for the expected value of any imputation credits created from the payment of company income tax.

<sup>31</sup> IPART, *Review of regulated retail tariffs and charges for electricity 2010-2013 | Final Report*, March 2010, p. 128.

- The risk of variation in their regulated load profile due to changes in economic conditions that affect the demand for electricity. This may mean their actual regulated load profile is different to that assumed in setting regulated tariffs (but still within the normal range).
- The risk of variation in wholesale electricity spot and contract prices due to changes in economic conditions and demand. This may mean their actual energy purchase costs are different to those assumed in setting regulated tariffs (but still within the normal range).
- General business risk due to changes in economic conditions. This may mean that their actual costs and revenues are different to those assumed in setting regulated tariffs due to factors such as unexpected changes in interest rates or exchange rates, equipment failures, or fraud.

Intuitively these risks should be common to all electricity retailers as they are risks not specific to each retailer but are unavoidable and theoretically relate to the impacts on the business from changes in economic conditions. As a consequence, estimates of this risk made for other jurisdictions are likely to be equally applicable to the ACT. The ICRC's prior approach of looking to evidence of an appropriate retail margin in NSW is consistent with this view.

The rate of return will change through time to reflect prevailing financial market conditions and the underlying systematic risks associated with the provision of regulated electricity retail services. There is no basis for concluding that a retailer's systematic risks increase broadly in line with CPI changes or the volume of electricity supplied.

### 3.3 The ICRC's proposed approach therefore fails to have sufficient regard to the cost recovery requirements in the ICRC Act

In summary, the analysis above has highlighted that the drivers of changes in each of the cost components of the retail margin are uncorrelated with movements in CPI and electricity volumes:

- retailers' working capital costs are directly related to the overall cashflows of the business (ie, total revenues and expenses), and will increase proportionally with increases in a firm's costs (such as energy purchasing costs and network costs) and its revenues, rather than changes in CPI or electricity volumes;
- the value of the customer asset base (a retailer's key intangible asset) is primarily linked to customer numbers and the expected retention period for customers, neither of which are correlated with changes in CPI or electricity volumes;
- the depreciation of tangible assets, such as billing and IT systems, is unlikely to change in line with CPI, as competitive businesses do not maintain indexed asset values and instead generally depreciate assets on a straight line (nominal) basis or a declining balance approach; and
- the return on capital is linked to the systematic risk of the retailer's cash flows, and so will vary over time in line with changes in systematic risk and changes in financial market conditions, neither of which is expected to be correlated with changes in CPI or electricity volumes

In consequence, the assumption underpinning the ICRC's change in the methodology for setting the retail margin is incorrect. An approach based on fixing the real value of the margin in MWh terms will not therefore ensure that the retail margin component of the regulated retail price model will be sufficient to compensate the retailer for the actual changes in the costs it faces as its overall cashflows change. Indeed, the potential for such an approach to lead to retailers under-recovering their actual costs was explicitly recognised by SFG Consulting in its earlier report for IPART:<sup>32</sup>

Holding the percentage EBIT margin constant means that if energy, network and operating costs rise over time, the dollar margin will also rise. An alternative approach is to hold a dollar margin constant or have it escalating at a growth rate, such as consumer price inflation. If estimation error is in proportion to costs, this alternative approach would expose retail businesses to increased risk over time that the margin is insufficient to cover their costs.

<sup>32</sup> SFG Consulting, *Methodology for estimating retail electricity margins*, Draft, 31 October 2012, p. 2.

The ICRC's proposed change in methodology for setting the retail margin is inconsistent with the requirement in the ICRC Act that the ICRC is to have regard to 'the cost of providing the regulated service',<sup>33</sup> as the ICRC has failed to examine how the various cost components making up the retail margin may change over time. The proposed change also fails to have sufficient regard to the other, more specific, requirements in the ICRC Act that the ICRC consider:<sup>34</sup>

- an appropriate rate of return on any investment in the regulated industry - since the return allowed on tangible assets will no longer be set by reference to the underlying systematic risk and financial market conditions; and
- the borrowing, capital and cash flow requirements of people providing regulated services and the need to renew or increase relevant assets in the regulated industry (emphasis added) – since the working capital element of the margin has been decoupled from the underlying cashflows.

---

<sup>33</sup> Independent Competition and Regulatory Commission Act 1997, section 20 (2)(e).

<sup>34</sup> Independent Competition and Regulatory Commission Act 1997, section 20 (2)(d)(i).

## 4. The ICRC approach has no empirical support

---

As noted in section 2.5, the ICRC's explanation in its draft decision for its proposed change in approach to calculating the retail margin is limited to a single paragraph. In this paragraph, the ICRC states that:<sup>35</sup>

If retail costs and the components of the retail profit margin are actually increasing broadly in line with CPI increases but the margin is applied to a cost base that is increasing at a materially higher rate, then the dollar value of the retail margin will be increasing at a rate that exceeds what is needed to ensure reasonable cost recovery and a reasonable profit margin.

This statement appears to represent the full extent of the analysis undertaken by the ICRC to explain the proposed change from calculating the retail margin as a fixed percentage of costs excluding the retail margin, to a constant real dollar per MWh margin.

The absence of detailed analysis supporting this decision is inconsistent with the AEMC's Best Practice Methodology. As noted in the previous section, the ICRC provides no evidence in support of its contention that the components of the retail profit margin move in line with changes in CPI and electricity volumes. Moreover, its decision to break the link between the retail margin and the cashflows of the retailer means that the earlier SFG Consulting study no longer provides empirical support for the ICRC's proposed margin. As a consequence, the 5.49 per cent (ex ante) retail margin proposed by the ICRC for 2017/18 is not grounded in any estimation technique, any financial model or any market data.

Moreover, the ICRC's approach is out of step with all other jurisdictional regulators.

This section highlights that:

- the three different approaches adopted by SFG Consulting estimated the retail margin as a percentage of total sales, and therefore lend no empirical support to the ICRC's draft decision to set a constant retail margin in real dollar per MWh terms; and
- the approach adopted by all other regulators that currently determine the retail margin for energy retailers effectively provides a retail margin as a percentage of total costs.

### 4.1 The SFG Consulting analysis underpinning the earlier retail margin was predicated on the retail margin being a percentage of total sales

The ICRC's draft decision states that the retail margin for 2017-18, expressed in terms of EBITDA/cost excluding the retail margin, is forecast to be 5.49 per cent - a fall from the 6.04 per cent provided for in 2016-17 standing offer prices. The absence of any additional analysis by the ICRC means that the proposed 2017-18 retail margin is effectively unsupported by any evidence.

Crucially, the ICRC's draft decision fundamentally breaks the link between the cash flows of the retailer and the required retail margin. This is inconsistent with the analysis undertaken by SFG Consulting that was previously relied on by the ICRC to set the retail margin from 1 July 2014 to 30 June 2017. Specifically, the SFG Consulting analysis only provides information on the retail margin as a percentage of total revenues,

---

<sup>35</sup> ICRC, *Draft decision*, March 2017, pp. 39-40.

and concluded that the best estimate of EBITDA/sales for a retailer is 5.7 per cent (which is equivalent to the ICRC's EBITDA/cost excluding the retail margin of 6.04 per cent).<sup>36, 37</sup>

The 2014 SFG Consulting study estimates EBITDA/sales using the following three approaches, consistent with its approach in 2007 and 2010:<sup>38</sup>

- the expected returns methodology that estimates the expected cash flows for a retailer and the systematic risk associated with these cash flows, and then determines a margin that compensates investors for this risk;
- a benchmarking approach which estimates the retail margins of comparative firms; and
- a bottom-up approach which used market transaction data to estimate a representative firm's asset base and an appropriate return.

The following sections describe in greater detail how each of the approaches adopted by SFG Consulting calculates the retail margin as a percentage of sales, and explains why the approach provides no support for the ICRC's presumption that the retail margin is constant in real dollar per MWh terms.

#### 4.1.1 Expected return methodology

The first approach that SFG Consulting used to estimate the retail margin for an electricity retailer is a function of the following three components:<sup>39</sup>

- cost of capital assumptions – the risk-free rate of interest, debt margin, market risk premium, systematic risk of returns as measured by the equity beta, financial leverage, corporate tax rate, and the value of imputation credits;
- economic assumptions – the standard deviation of percentage change in volume in response to economic conditions and the standard deviation of market returns; and
- operating leverage as measured by the proportion of costs which increase at a constant rate with changes in volume.

The retail margin was computed using the mid-points of the assumptions for each of these components. Further, SFG Consulting then estimated a reasonable range using scenario analysis that adopts different assumptions for each three components, ie, a high-point, mid-point and low-point.

In its 2013 study, SFG Consulting predicts an EBITDA/sales margin of between 3.5 to 4.7 per cent.<sup>40</sup>

However, importantly, SFG Consulting provided estimates of the retail margin using its expected returns methodology to IPART in 2007, 2010 and 2013. Each of these estimates applied prevailing financial market conditions and best estimates of the other cost components of a benchmark retailer. This approach is inconsistent with the ICRC's assumption that the dollar per MWh retail margin is constant in real terms.

<sup>36</sup> We note that SFG Consulting's analysis of the retail margin was on an EBITDA/sales basis. This was converted by the ICRC in 2014 to an EBITDA/costs excluding the retail margin basis. See ICRC, *Standing offer electricity prices from 1 July 2014 | Final report*, June 2014, pp. 33-34.

<sup>37</sup> We note that the SFG report translates its estimate of the retail margin of 5.7 per cent into both a \$/customer (\$125/customer) and a \$/MWh (\$11.62/MWh) amount. However, these values have been derived from the percentage estimate and the assumed costs of a benchmark retailer in 2013 and the translation is only valid for that point in time.

<sup>38</sup> SFG Consulting and Frontier Economics, *Mass market new entrant retail costs and retail margin*, March 2007; SFG Consulting, *Estimation of the regulated profit margin for electricity retailers in New South Wales*, 16 March 2010; and SFG Consulting, *Estimation of the regulated profit margin for electricity retailers in New South Wales*, 4 June 2013.

<sup>39</sup> SFG Consulting, *Estimation of the regulated profit margin for electricity retailers in New South Wales*, 4 June 2013, pp. 8-9.

<sup>40</sup> SFG Consulting, *Estimation of the regulated profit margin for electricity retailers in New South Wales*, 4 June 2013, p. 14.

#### 4.1.2 Benchmark approach

The second approach SFG Consulting adopted to estimate EBITDA/sales of a benchmark retailer was to benchmark the retail margin of a range of retail businesses. The rationale for this approach is that a benchmark electricity retail business should face broadly similar systematic risks as other retail businesses.

SFG Consulting's study in 2013 analysed the EBITDA/sales ratio of 92 listed retailers in the United States, United Kingdom, Australia, Canada and New Zealand. SFG Consulting selected these firms on the basis that the companies were classified by FTSE as "Retail" and that for each firm there was publicly available data for the period 1980 to 2012. This resulted in a sample of 7,990 annual observations of the EBITDA/sales margins.<sup>41</sup>

Following the removal of outliers, SFG Consulting calculated that the EBITDA/sales margin was within the range of 6.3 to 6.6 per cent.<sup>42</sup>

Importantly, the retail margin was directly estimated for each entity and each year as a function of total sales. SFG Consulting did not examine the retail margin for each entity on a time-series basis. Consequently, the analysis presented by SFG Consulting in its 2013 study cannot be used to draw conclusions in relation to the movement in retail margins through time. In order for the ICRC to confirm its presumption that retail margins are constant in real dollar terms, it would be necessary to undertake this type of time series analysis.

#### 4.1.3 Bottom-up approach

SFG Consulting also estimated the EBITDA/sales margin of a benchmark retailer using a bottom-up approach. A bottom-up approach involves estimating the costs of a benchmark retailer, and then deriving the EBITDA/sales margin.

To compute the costs of the benchmark retailer SFG Consulting first estimated the value of the assets of a benchmark Australian electricity and gas business. SFG Consulting estimated the value of the benchmark retailer by reference to 12 transactions of Australian electricity and gas retailers over the 12-year period from 1999 – 2010. SFG Consulting estimated the value of a retailer as \$1,141 per customer and \$89 per MWh of equivalent energy.

SFG Consulting found that using a bottom-up approach resulted in a EBITDA/sales margins of 5.6 to 7.0 per cent.<sup>43</sup>

Again this approach directly estimates the retail margin as a percentage of sales, and so provides no evidence of the retail margin on per MWh terms. Nor does the approach provide any basis for a conclusion that retail margins on a per MWh basis are increasing broadly in line with changes in CPI and sales volumes.

## 4.2 The ICRC methodology is out of step with the approach adopted by other jurisdictional regulators

The ICRC's draft decision to change the methodology for setting the retail margin from a percentage of overall costs is out of line with the approach adopted by all other Australian jurisdictional regulators. Table 1 shows uniformity in the method for setting the retail margin adopted by those regulators that still determine regulated standing offer prices for energy retailers.

<sup>41</sup> SFG Consulting, *Estimation of the regulated profit margin for electricity retailers in New South Wales*, 4 June 2013, p. 19.

<sup>42</sup> SFG Consulting, *Estimation of the regulated profit margin for electricity retailers in New South Wales*, 4 June 2013, p. 21.

<sup>43</sup> SFG Consulting, *Estimation of the regulated profit margin for electricity retailers in New South Wales*, 4 June 2013, p. 29.

Table 1: Approach adopted by other regulators to setting the retail margin

Regulator (Current)	Date	Industry	Method
ICRC	2014	Electricity	Percentage of sales (excluding the retail margin)
QCA	2016	Electricity	Margin is included in variable costs and is proportional to the total costs
IPART <sup>44</sup>	2016	Gas	Percentage of sales
OTTER <sup>45</sup>	2016	Electricity	Percentage of sales (excluding under/over adjustments)
Regulator (Expired)	Date	Industry	Method
IPART	2013	Electricity	Percentage of sales
ESCOSA <sup>46</sup>	2010	Electricity	Percentage of retail operating costs and wholesale energy costs

Table 1 shows that all regulators currently apply the retail margin as a percentage of the total costs of providing retailing services to standing offer customers (ie, including wholesale market costs). Further, prior to the removal of retail price regulation, regulators in other jurisdictions were also setting the retail margin as a percentage of costs.

The decision by other regulators to apply the retail margin to total costs, so that the allowance varies in line with changes in total costs, is a deliberate one:

... we have decided to set the retail margin as a fixed percentage of each retailer’s total costs (retail and network) for the determination period. ...

One consequence of setting the retail margin as a fixed proportion of costs is that the retail margin allowance (expressed as a dollar amount) increases whenever energy, retail and network costs increase.<sup>47</sup>

Regulators’ stated reasons for adopting a retail margin that is a percentage of total costs include:

Conceptually, we consider it reasonable to assume that variable retail costs (including the required margin) would increase as underlying costs increase. This is because retailers face greater risk as underlying costs (and customer bills) increase—retailers should be compensated for this additional risk.<sup>48</sup>

<sup>44</sup> IPART, *Review of regulated retail prices and charges for gas from 1 July 2016*, | *Final Report*, June 2016, p. 41.

<sup>45</sup> Office of the Tasmanian Economic Regulator (OTTER), *2016 Standing Offer Price Determination*, 5 May 2016, paragraph 7.

<sup>46</sup> ESCOSA, *2010 Review of Retail Electricity Standing Contract Price Path | Final Inquiry Report & Final Price Determination*, December 2010, p. A-94.

<sup>47</sup> IPART, *Review of regulated retail prices and charges for electricity | From 1 July 2013 to 30 June 2016 | Final Report*, June 2013, p. 96.

<sup>48</sup> QCA, *Regulated retail electricity prices for 2016-17*, May 2016, p. 119.

Finally, we also note that the ICRC's draft decision is inconsistent with the AEMC's Best Practice Methodology for setting regulated retail tariffs in so far as its decision on the retail margin because:

- the draft decision on the retail margin is not supported by any estimation technique, nor any financial modelling, market data or other evidence;
- the decision does not rely on any analysis of the required retail margin for a benchmark retailer in the circumstances of ActewAGL Retail, and so the draft decision does not reflect current best practice estimation techniques; and
- the draft decision to maintain the real per MWh retail margin was made without any regard to current financial market conditions, and, furthermore, the approach is incapable of incorporating information on prevailing retail margin costs.





# HOUSTONKEMP

Economists

---

## Sydney

Level 40  
161 Castlereagh Street  
Sydney NSW 2000

Phone: +61 2 8880 4800

## Singapore

10 Marina View  
#15-10 Asia Square Tower 1  
Singapore 018960

Phone: +65 6817 5010

## Attachment 2

**Table 2: Summary of Regulatory CARC and ROC Decisions in different jurisdictions**

State Regulator's Decision	CARC allowance	ROC allowance
<b>NSW IPART</b> 2013 Review of regulated retail prices and charges for electricity	Separate CARC of up to \$22/MWh (depending on extent to which other cost allowances already provide a margin) <sup>40</sup> ie \$23.80/MWh in \$2017/18.	ROC (excluding CARC) is \$110/customer ie \$119.17 (in \$2017/18) based on forecast efficient ROC for a Standard Retailer of range \$106.20 - \$112.20 per customer. <sup>41</sup>
<b>South Australia ESCOSA</b> 2010 Review of Retail Electricity Standing Contract Price Path Draft Inquiry Report and Draft Price Determination	CARC of around \$41.90 per customer <sup>42</sup> ie \$48.78 (in \$2017/18).	ROC (including CARC) of \$115 <sup>43</sup> ie \$134.65 in \$2017/18 per customer is reasonable
<b>Queensland QCA</b> , May 2016 Final Determination Regulated Retail Electricity Prices for 2016-17	<ul style="list-style-type: none"> <li>In ROC</li> <li>Additional 5% headroom allowance (of total costs) for SE Queensland.<sup>44</sup></li> </ul>	Average ROC (incl CARC) of \$232.21/residential customer/annum <sup>45</sup> ie \$238.02 in \$2017/18
<b>Tasmania OTTER</b> May 2016 Investigation to determine maximum standing offer prices for small	In ROC	ROC of \$138.45/customer ie \$141.91 in \$2017/18. <sup>46</sup>

<sup>40</sup> IPART 2013 Review of regulated retail prices and charges for electricity p.119-120

<sup>41</sup> IPART 2013 Review of regulated retail prices and charges for electricity p.98

<sup>42</sup> ESCOSA 2010 Review of Retail Electricity Standing Contract Price Path Draft Inquiry Report and Draft Price Determination p. A96

<sup>43</sup> ESCOSA 2010 Review of Retail Electricity Standing Contract Price Path Final Inquiry Report and Final Price Determination p. A89

<sup>44</sup> QCA 2016 Regulated Retail Electricity Prices for 2016-17 Final Determination p.48

<sup>45</sup> QCA 2016 Regulated Retail Electricity Prices for 2016-17 Final Determination p.32



State Regulator's Decision	CARC allowance	ROC allowance
customers on mainland Tasmania: Final Report		
<b>ACT ICRC</b> Standing offer prices for the supply of electricity to small customers from 1 July 2017: Draft Report	NO CARC	ROC is \$120.8 per customer for 2017/18. <sup>47</sup>

---

<sup>46</sup> OTTER 2016 Investigation to determine maximum standing offer prices for small customers on mainland Tasmania, Final Report May 2016 p.58

<sup>47</sup> ICRC Draft Report 2017 p.53