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2011 Review of the South Australia gas standing contract retail operating cost and retail operating margin:

Report to the Essential Services Commission of South Australia

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April 2011

About Sapere Research Group Limited

Sapere Research Group is one of the largest expert consulting firms in Australasia and a leader in provision of independent economic, forensic accounting and public policy services. Sapere provides independent expert testimony, strategic advisory services, data analytics and other advice to Australasia's private sector corporate clients, major law firms, government agencies, and regulatory bodies.

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1 Executive summary

Introduction

This report presents Sapere Research Group's (Sapere) initial review of Origin Energy's (Origin) proposals for regulated prices to be applied to mass market gas accounts in South Australia (SA) for the three year period beginning 1 July 2011. The report is intended to assist the Essential Services Commission of South Australia (ESCOSA) in making its 2011 Draft Determination on the average retail price cap to apply to Origin's Standing Retail Contract, with respect to allowances for retail operating costs (ROC) and retail operating margins (ROM). The Standing Retail Gas Contract is available for mass market gas accounts (both residential and business) consuming less than one Tera Joule (TJ) of gas annually.

Under the terms of reference, the report is required to:

- *make recommendations on the use of benchmarking or other methodologies for use in the review, including with reference to approaches taken in other jurisdictions;*
- *analyse the cost drivers and operational risks specific to the various retail customer classes of Origin Energy, including in relation to gas standing contract customers as compared to other small customers generally, and make recommendations as to the appropriate allowance to be made for these specific risks;*
- *Identify all relevant risks and assign an appropriate risk premium to those risks, ensuring that this risk allowance has not also been included in the wholesale gas cost; and*
- *incorporate any assumptions of cost escalation and/or efficiency adjustments over the term of the price path (1 July 2011 to 30 June 2014).*

Overall finding

The report's overall finding is that Origin's proposals for ROC and ROM, taken together, may exceed the costs that an efficient mass market retailer would be expected to incur in meeting the responsibilities of standing contract supply to small gas customers in SA. Accordingly, at this stage in the Commission's 2011 Gas Review process, our estimate for setting ROC and ROM allowances is below those proposed by Origin in its formal proposal dated November 2010.

The estimated combined ROC and ROM is $19.61 per account or 12.6 per cent lower than Origin's proposal for residential accounts.[1]

Our estimates compared with Origin's proposals are summarised in Table 1.1 for residential standing contract gas accounts.

Table 1.1- Summary of findings - residential

Item	Sapere estimates		Origin proposal[2]		Percentage difference
All December 2011 dollar values	$/account	$/GJ	$/account	$/GJ	
Core Retail costs (ex REES)	78.41[3]	3.79	NA	NA	
Account acquisition costs (AAC)	24.72	1.20	NA	NA	
Total retail operating costs (ROC)	103.13	4.99	117.87	5.69	-12.5
Retail operating margin (per cent)	13		14.1		-7.8
Retail operating margin (ROM)	33.43	1.62	38.29	1.85	-12.7
Gross retail margin (GRM)	136.56	6.60	156.16	7.55	-12.6

[1] All dollar values discussed in this report are exclusive of the Goods and Services Tax (GST). The ROM dollar calculation is exclusive of AEMO charges as these are deemed to be non-controllable costs. The values are also exclusive of an allowance for the Residential Energy Efficiency Scheme.

[2] Origin in its formal proposal does not decompose ROC into Core Retail Costs and AAC. Origin does not propose dollar values for ROM per customer but the values are consistent with its proposed dollar values per GJ. The dollar values for ROM are subject to allowances for controllable costs over the price path period and the values in this report should be interpreted as indicative only.

[3] See discussion below suggesting this value should be adjusted for the second and third years of the price control period.

For business accounts our estimate is $26.89 per account or 9.8 per cent lower than Origin's proposal. Table 1.2 provides corresponding findings relative to business standing gas contracts.

Table 1.2 Summary of findings - business

Item	Sapere estimates		Origin proposal		Percentage difference
All December 2011 dollar values	$/account	$/GJ	$/account	$/GJ	
Retail costs (ex REES)	78.41[4]	0.53	NA	NA	
Account Acquisition Costs (AAC)	24.72	0.17	NA	NA	
Total retail operating costs (ROC)	103.13	0.70	117.87	0.80	-12.5%
Retail operating margin (per cent)	13		14.1		-7.8
Retail operating margin (ROM)	144.65	0.98	156.80	1.07	-7.7%
Gross retail margin (GRM)	247.78	1.68	274.67	1.87	-9.8%

The estimates for business accounts vary from residential accounts for two key reasons relating to ROM:

- We understand the average residential account is assumed by ESCOSA to consume 20.68GJ per annum, while the average business account is assumed to consume 147.1GJ per annum.

- There are differences in wholesale gas and transmission costs reflecting the flatter consumption profile (higher load factor) for the average business account.

We have expressed our findings as point estimates for purposes of transparency and ease of comparison. We note, however, that there is necessarily a level of imprecision with these estimates and these should be interpreted as midpoints within a range.

[4] See discussion below suggesting this value should be adjusted for the second and third years of the price control period.

Use of benchmarking and other methods

The Sapere assessment of ROC was based on a combination of the following data and other information:

- Origin's formal proposal to the Commission dated November 2010, together with additional confidential supporting information provided to ESCOSA, including actual and forecast costs for the national retail business segment;
- A review of relevant efficient benchmarks for ROC and ROM, normalised for conditions in SA gas;
- A review of the outlook for the costs of serving mass market retail gas accounts in SA; and
- Consideration of the risks associated with mass market energy retailing, other than risks addressed in relation to wholesale gas purchase and transmission costs.

Our estimates for ROC and ROM placed greater weight on benchmarks than on Origin's reported actual and forecast costs for its national retail business segment. In part this reflects the fact that under best practice price regulation, ROC and ROM should be set relative to the costs of an efficient energy retailer, rather than to costs incurred specifically by the regulated entity (Origin in its capacity as the Declared Gas Retailer in SA). To do otherwise could potentially penalise high levels of efficiency or reward low levels of efficiency.

In addition, there are practical difficulties in estimating ROC and ROM for mass market gas accounts in SA. There is no financial reporting entity corresponding to Origin's SA gas retail mass market business. Available cost data relate to a national retail reporting entity that spans both gas and electricity. In addition, these data depend on the allocation of energy trading and corporate overhead costs to the retail segments of large national retailers. These data also include commercial and industrial accounts, typically with significantly higher average costs per account.[5]

These limitations mean extensive extrapolations and judgments are necessary to estimate efficient ROC and ROM associated with serving Origin's SA mass market

[5] We note that Origin's submission separated Industrial and Commercial accounts from mass market accounts. From public disclosure by some other retailers, however, it is often not possible to separate the costs of serving large accounts from others.

gas customers. This limits the validity of estimates of ROC and ROM based on available financial data.

Our analysis refers broadly to the same set of benchmarks as proposed by Origin in its submission, with respect to ROC and ROM values. This included relevant regulator decisions for both gas and electricity in SA (electricity), NSW, Queensland and the ACT, as well as ECOSA's estimates of ROC and ROM for the SA electricity mass market in its 2010 Review. Our analysis uses reported costs for both Origin and other major retailers to inform the interpretation of relevant benchmarks in relation to the specific circumstances that apply in SA gas retailing.

While some of the benchmark estimates explicitly involved assessments of economies of scale, there were no explicit assessments of economies of scope. IPART's estimate, for example, may be based on a standalone electricity retailer, rather than a dual fuel retailer. To the extent this is so, benchmark estimates may over-state efficient costs for a dual fuel retailer.

Operational cost drivers – ROC

Our estimated overall ROC per account is $103.13 compared with Origin's proposed $117.87. Note the values are *exclusive* of an allowance for the Residential Energy Efficiency Scheme (REES).

In 2011 values, the ROC provided for in the 2008 ESCOSA Gas Determination is $97.13 per account. Our estimate of ROC for the period 2011/12-2013/14 therefore represents an increase of $6.00 per account or 6.2 per cent relative to the ROC allowance in the current standing contract gas tariff. The overall GRM also represents an increase of 4.6 per cent relative to a case where the existing GRM is rolled forward using updated wholesale gas costs.

Account Acquisition Costs

In its recent Determinations for both gas and electricity, ESCOSA acknowledged that AAC may legitimately be incorporated into Standing Contract average prices. The benefit of this for Standing Contract consumers is that retailer costs can be estimated relative to large scale, national retailers, as opposed to small scale local retailers with declining account numbers.

Origin proposed that GRM[6] incorporate an appropriate allowance for AAC. Consistent with ESCOSA's 2010 electricity determination, Origin proposed that the

[6] Gross Retail Margin refers to the sum of ROC and ROM.

AAC allowance should be provided for within the ROC component, rather than within ROM.

In its November 2010 Issues Paper, ESCOSA suggested there may be a case for considering the acquisition of gas customers to be a by-product of the acquisition of electricity customers. In this case, the AAC allowance could be set based only on the *marginal cost* of acquiring a gas customer.[7]

The issue, therefore, is whether the AAC allowance applied by ESCOSA in its 2010 Electricity Determination should be applied for gas. Our view is that two adjustments are necessary to take into account relevant differences between the gas and electricity markets in SA:

- the fact that switching rates for gas are significantly lower than for electricity in SA; and

- convergence between gas and electricity, together with the fact that in SA gas is subsidiary to electricity, implying that the marginal cost of the average gas account switch is less than that for the average electricity account switch;

Account switching activity in the SA gas market historically is significantly lower than in the SA electricity market.[8] Based on historical data, average gas switching rates are around three quarters of electricity switching rates.

It also seems likely that in future gas switching rates will continue to be lower than for electricity. This is because competition in the SA gas market is weaker than competition in the SA electricity market. Whereas there are ten mass market electricity retailers, there are only four mass market gas retailers. All four mass market gas retailers in SA also sell electricity (TRUenergy, Origin, AGL and Simply Energy). There are no standalone gas retailers, but there are six standalone mass market electricity retailers.

Convergence efficiencies apply to customer switching. This reflects evidence that:

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[7] See discussion at page 25 of ESCOSA's *November 2010 Issues Paper for its Review of Gas Standing Contract Prices 2011/12 – 2013/14*.

[8] See for example Figure E:1 on page 3 of ESCOSA's *Annual Performance 2009-10 report for the South Australian Energy Supply Industry*, dated November 2010.

- a significant and growing proportion of customers purchase both gas and electricity from the same provider;
- benchmark AAC allowances may not fully take into account dual fuel efficiencies in retailer operating platforms;
- gas is very much the subsidiary market in the SA electricity and gas mass market context; and
- the marginal switching cost for gas is likely to be significantly less than for electricity.

Estimating the average account switch saving from energy market convergence is difficult and there are limited data. Nevertheless, in principle the efficiency saving could be substantial on a per account basis. For present purposes, we suggest an estimate of 30 per cent of the estimated stand alone cost is applied. We note, however, that there is a significant level of uncertainty over this value and hence it may require revision on the basis of further information.

A further relevant consideration is there is only one mass market gas supplier serving regional SA. Origin Energy's confidential submission (at Table 4.5) indicates that regional customers represent just over seven per cent (residential) and six per cent (business) of the total number of customers on standing gas contracts.

If AAC were set at electricity market switching rates, it is possible that Origin could be over-compensated with respect to its gas accounts. The result could be higher prices for SA gas accounts, especially those in regional areas where customers are unable to switch retailers.

AAC estimate

Our AAC estimate is based on our understanding of the AAC component incorporated within ESCOSA's final 2010 decision for electricity. This component has been adjusted for the lower switching rate[9] applicable to the SA gas market.

In its discussion of ROC benchmarks from other jurisdictions, ESCOSA's 2010 electricity Determination referred to the customer acquisition and retention cost

[9] The industry often uses the term "churn" to refer to switching but we prefer "switching" to differentiate from account switching within the term of a retail contract.

(CARC) value from IPART's 2010-2013 decision for electricity[10] and implicitly used this in its reasoning of the CARC for SA, as it decided on a total ROC of $115, which was at the lower end of IPART's total ROC.

We converted this $38.50 CARC $Dec10 to its $Dec11 value ($39.46). We disaggregated this value and in particular the allowances for account retention costs and transferring existing customers, applying the values referred to in IPART's bottom up analysis.[11]

The difference between this and ESCOSA's implied CARC used in its 2010 Electricity Determination was then calculated ($30.66, being the new account acquisition component of CARC). This value was then subject to two adjustments:

- $7.91 was deducted to reflect the fact that the historical switching rate for the SA gas market is 74 per cent of that for the SA electricity market; and
- a further $6.82 was deducted to reflect the estimated marginal cost of gas switching, based on an assumed efficiency saving of 30 per cent.

The final step was to sum the adjusted new acquisition cost with the retention and transfer costs. This resulted in an estimated $24.72 for gas AAC.

[10] ESCOSA, *Final Inquiry Report & Final Price Determination 2010* page A 86 table 8.1

[11] See page 121 of IPART's *Review of regulated retail tariffs and charges for electricity 2010-2013*.

The calculation is summarised in Table 1.3.

Table 1.3- AAC estimate

	Nominal	$Dec11	
Overall CARC allowance, of which…	$38.50	39.46	Nominal value in $Dec10
Retention costs	$6	$6.60	Nominal value in $Dec09
Transfer costs	$2	$2.20	Nominal value in $Dec09
New Account acquisition component		$30.66	
Adjustment for SA gas switching rate		$22.75	11.25% vs15.2% based on AEMO/REMCO monthly transfer data[12]
Adjustment for marginal cost of gas switching due to convergence		15.92	Based on 70 per cent of $22.75
Sum of adjusted acquisition cost and retention/transfer costs		$24.72	

Residential Energy Efficiency Scheme

Origin proposed an allowance for REES of $1.61 per account for 2010-11 based on the existing REES scheme.[13] Our understanding is that this proposal is consistent with ESCOSA's view on the efficient cost of meeting the existing REES. For ease of comparison we have excluded an allowance for REES in our estimates for ROC, ROM and GRM, although we acknowledge all these values need to be adjusted for REES.

Origin noted that the future of the REES scheme beyond 2011 is uncertain. It proposed that the cost of meeting REES liabilities thereafter would be managed via pass through arrangements.

A possible alternative ESCOSA could consider is to make a provisional allowance for REES costs in 2012-13 and 2013-14 on the best available information on REES costs.

[12] The switching data related to monthly averages for the 36 month period from 1 January 2008 to 31 December 2010.

[13] Refer to Page 33 of Origin's Confidential Submission dated November 2011.

This would be subject to revision once decisions on the future of the REES have been made. An advantage of this option is that some provision is made for REES in the second and third years of the price path period, while there remains flexibility to adjust this via pass through provisions if circumstances change.

Risk – Retail Operating Margin

Origin's proposal is for ROM to continue to be calculated as a percentage mark up on aggregate wholesale gas purchase costs and ROC, as in the current Determination. Further, Origin proposes that the present mark up of 13 per cent should be increased to 14.6 per cent in the second and third years of the price path period.

Origin's proposal is based primarily on the benchmark established under NSW IPART's 2010 Review of regulated retail tariffs and charges for gas.[14] Origin's proposal does not provide a comprehensive, itemised, cost justification for a material increase in the ROM.

The implication of Origin's proposal is for ROM to be set at an average of 14.1 per cent over the three year period. Our view is that the present mark up for 13 per cent should be retained throughout the price path period for reasons set out below.

Origin's proposal provides for an implied ROM allowance of $38.29 per account. Our estimate is around $33.43, which is $4.87 or 12.7 per cent lower than Origin's for residential accounts. For business accounts, the difference is lower in percentage terms (7.7 per cent) but greater in dollar terms ($12.15), reflecting the much higher average consumption assumption for average business accounts.

The current 2008 ESCOSA Gas Determination ROM allowance appears to incorporate a component for historical AAC.[15] There was, however, no allowance for ongoing AAC within ROC. By contrast, the estimate for ROC above incorporates an allowance for AAC. Depending on the basis for the existing 13 per cent ROM allowance, it is possible that inclusion of AAC within ROC requires an offsetting reduction in ROM.

[14] Refer to page 36 of Origin's Confidential Submission.

[15] See discussion at pages A97- A99 of Part AB of ESCOSA's *2008 Gas Standing Contract Final Determination.*

The IPART determination was made under Voluntary Transitional Pricing Arrangements (VTPA) specific to NSW. In SA, the relevant regulatory framework is set under the ESCOSA Act.

IPART's allowed retail margin for gas is based on IPART's view that gas retailers face substantially higher costs per account compared with electricity retailers. It appears a significant portion of these costs relate to depreciation and amortisation charges. A large portion of depreciation and amortisation charges may relate to historical acquisition costs. A further consideration is that it appears the IPART ROC for gas does not explicitly incorporate an allowance for AAC.

Based on a review of retailer costs in SA, we agree that adjustments are required to reflect gas market conditions. This includes the fact that gas expenditures per account are much lower than electricity while some costs recovered via ROM, such as depreciation of IT systems, are likely to be similar across both gas and electricity.

The available evidence indicates there is a high level of convergence between gas and electricity and hence it is unlikely that gas retailers in SA face higher fixed and depreciations costs per account than electricity retailers. In addition, it is possible that IPART's analysis of gas ROM is influenced by market returns and these may exceed margins necessary to recover efficient costs. Given all these factors, we do not agree that the IPART benchmark for ROM should be applied in SA.

Cost escalation/efficiency adjustments

Origin's proposal is that ROC should remain constant in real terms over the price path period while ROM would increase in the second and third years. Based on an analysis of potential cost escalation and efficiency trends, there is a mixed and uncertain outlook associated with future retailer costs. There are potential upward movements in costs, but these can be managed within the overall regulatory package.

There is scope for potential further efficiencies associated with convergence between gas and electricity, but the timing and scale of these is difficult to determine. A further relevant issue is the extent to which it is assumed convergence benefits are immediately passed through to consumers in the form of lower prices, or retained by retailers.

In setting the level of efficiency adjustments, a number of factors should be taken into account, including:

- Uncertainty over estimates of achievable efficiency gains and the timing of these;

- The importance of incentives and the desirability of sharing efficiency benefits, whereby the regulated entity is rewarded for identifying and initiating efficiencies; and

- The significant risks of complex information system and business process transformation projects. Risks include efficiency benefits being smaller and/or later than expected.

Depending on how estimation and efficiency benefit sharing issues are analysed, we suggest forward efficiency adjustments relating to core ROC of up to 5 per cent per annum, before sharing, over the final two years of the price control period, may be reasonable. A reduction in core ROC implies a slight reduction in ROM.

Table 1.4 below summarises the implications of two efficiency adjustment scenarios for the period from 2011-12 to 2013-14 (for residential).

Table 1.4: Projected efficiency adjustment

2.5 per cent case			
(per residential account)	2011-12	2012-13	2013-14
Core ROC	78.41	76.45	74.54
AAC	24.72	24.72	24.72
ROC	103.13	101.17	99.26
ROM	33.43	33.17	32.92
GRM	136.56	134.34	132.18
5 per cent case			
(per residential account)	2011-12	2012-13	2013-14
Core ROC	78.41	74.49	70.77
AAC	24.72	24.72	24.72
ROC	103.13	99.21	95.49
ROM	33.43	33.17	32.92
GRM	136.56	132.38	128.41

2 Introduction

Sapere has been commissioned by the Commission to review the South Australian (SA) gas standing contract retail operating costs (ROC) and retail operating margins (ROM) for the three-year period following the expiry of ESCOSA's current retail determination on 30 June 2011.

This current review by Sapere is the second of a three part project to advise the Commission in forecasting the relevant costs to determine the gas standing contract price.

2.1 Terms of reference

The Consultant will be required to provide advice as to the appropriate allowances for ROC and a retail margin for a prudent gas entity in delivering the range and standard of services that are required of Origin Energy in providing standing contract services to South Australian small customers. This component of work must include making an appropriate degree of reference to Origin Energy's claimed operating costs and retail margin and make recommendations as to a reasonable methodology for forecasting these costs. The Consultant is expected to:

- *make recommendations on the use of benchmarking or other methodologies for use in the review, including with reference to approaches taken in other jurisdictions;*
- *analyse the cost drivers and operational risks specific to the various retail customer classes of Origin Energy, including in relation to gas standing contract customers as compared to other small customers generally, and make recommendations as to the appropriate allowance to be made for these specific risks;*
- *incorporate any assumptions of cost escalation and/or efficiency adjustments over the term of the price path (1 July 2011 to 30 June 2014); and*
- *Identify all relevant risks and assign an appropriate risk premium to those risks, ensuring that this risk allowance has not also been included in the wholesale gas cost.*

The Commission has recently reviewed its methodology for setting standing contract prices and has determined that it is appropriate to continue to use a building block (cost-based) approach to determine gas standing contract prices for the three year period to run from 1 July 2011 to 30 June 2014. (This is contrary to the RPM methodology that is being used to fix electricity standing contract prices.)

It is recognised that a number of changes have taken place in the gas retail market over the course of the current standing contract price period and the effects of these will need to be will be addressed as part of the review. For example, the Residential Energy Efficiency Scheme (REES) commenced on 1 January 2009 and is set to run until 31 December 2014. These obligations impact on the ROC of a standing contract gas retailer.

In setting the standing contract price, the Commission will have regard to the costs of an efficient new entrant retailer in meeting the responsibilities of the standing contract, rather than costs specifically incurred by Origin Energy. This approach ensures that gas retailers are able to compete in the market and deliver to consumers the benefits of competition.

In undertaking a building blocks approach to setting standing contract price determination (and noting that in each case the Commission is only considering the retailer component of tariffs, with network tariffs being set by a separate process and incorporated in the overall price as a stand-alone amount), the Commission examines and forecasts the various costs that a standing contract retailer faces:

- *wholesale gas costs (WGC) and transmission costs – the total costs of purchasing wholesale gas (actual cost as adjusted by reference to the effect of any relevant cost hedging instruments) and of transmitting that gas;*
- *retail operating costs (ROC) - that is, the cost of running a retail operation; and*
- *retail margin – which covers other retail costs such as working capital, depreciation and a return on assets.*

Once those costs are established, the Commission determines an aggregate annual revenue requirement which meets those costs, and prices are fixed to deliver that revenue. Prices are adjusted annually in accordance with a CPI price control formula. In previous determinations, separate price control formulae have been established for residential customers and small business customers. The standing contract price determination scheme also allows for the passing-through of specified exogenous cost items which, while identifiable in nature, are not able to be positively determined in terms of quantum at the time of making the determination (such as the effects of a change in the Australian taxation system[16]).

[16] Refer, for example, clause 4.1.1(a) of the *2008 Gas Standing Contract Price Determination, Part B*. Available from the Commission's website at http://www.escosa.sa.gov.au/library/080624-GasStandingContractPrice_2008-FinalDetermination-PartAB.pdf

2.2 Statutory criteria

Part 3 of the ESC Act requires the following.

s25(4) *In making a price determination, the Commission must (in addition to having regard to the general factors specified in Part 2) have regard to:*

(a) the particular circumstances of the regulated industry and the goods and services for which the determination is being made;

(b) the costs of making, producing or supplying the goods or services;

(c) the costs of complying with laws or regulatory requirements;

(d) the return on assets in the regulated industry;

(e) any relevant interstate and international benchmarks for prices, costs and return on assets in comparable industries;

(f) the financial implications of the determination;

(g) any factors specified by a relevant industry regulation Act or by regulation under this Act;

(h) any other factors the Commission considers relevant.

Additionally, Part 2 s6 of the ESC Act requires that in performing the Commission's functions, the Commission must:

(a) have as its primary objective protection of the long term interests of South Australian consumers with respect to the price, quality and reliability of essential services; and

(b) at the same time, have regard to the need to –

(i) promote competitive and fair market conduct; and

(ii) prevent misuse of monopoly or market power; and

(iii) facilitate entry into relevant markets; and

(iv) promote economic efficiency; and

(v) ensure consumers benefit from competition and efficiency; and

(vi) facilitate maintenance of the financial viability of regulated industries and the incentive for long term investment; and

(vii) promote consistency in regulation with other jurisdictions.

Under the provisions of section 34A of the Gas Act 1997, Origin Energy Retail Ltd (Origin Energy) is the declared standing contract retailer and is required to offer to sell and supply gas to any small gas customer (persons using less that 1 terajoule (TJ) of gas per annum) on request.

The retail determination applies to Origin Energy's South Australian gas retail business (Origin), which as a regulated entity under relevant SA legislation forms part of Origin's national retail energy business segment. As for its previous review for the period 1 July 2008 to 30 June 2011, the Commission will continue to use a building block (cost-based) approach to determine gas standing contract prices for the period to 30 June 2014.

2.3 Report structure

The remainder of this report is structured as follows:

Section 3:– provides a context and framework for the analysis, and defines key concepts such as ROC and ROM;

Section 4: – provides an overview of the Origin proposal;

Section 5: –reports the findings of our analysis of benchmarks and normalisation; and

Section 6: – provides further analysis and findings.

3 Context and framework for analysis

3.1 Introduction

This chapter discusses the context and framework for the analysis of Origin's ROC and ROM proposal. It reviews retailer costs and key aspects of the SA energy market. It also sets out some of the key concepts and issues that form the foundation for the framework for analysis in later chapters.

3.2 Retailer costs and margins

Table 3.1 below provides an overview of retailer costs and margins.

Table 3.1 - Overview of retailer margins		
	Item	**Description**
	Total gas revenue	Sales volume * price, plus fees and charges
Less	Distribution network charges	Non-controllable regulated distribution network charges
Equals	Total controllable revenue	Total revenue minus distribution network charges
Less	Cost of Goods Sold (COGS) – controllable	Wholesale gas cost, transmission cost and market charges
Equals	Gross Retail Margin	Total retailer revenue minus total COGS
	Total Retailer Operating Costs	Internal retailer costs other than those recovered from net margins (ROM)
Less	Revenue from fees and charges	Retailer operating costs recovered from fees and charges
Equals	Retail Operating Cost (ROC)	Retailer operating costs recovered from energy sales
Equals	EBITDA	Earnings before interest tax, depreciation and amortisation
Less	Retail operating margin (ROM)	1. Depreciation & amortisation (return of capital)[17] 2. Cost of debt and equity (return on capital), 3. Corporate and State Taxes
Equals	Earnings after tax	In a competitive market, the typical retailer's EAT is in theory zero.

3.2.1 Retail operating costs (ROC)

ROC refers to the total annual operating expenditure of a retail business, exclusive of costs recovered from specific fees and charges for specific services. ROC can also be expressed as an annual cost per account (cost to serve), or on a volume (per GJ)

[17] The EBIT margin is the residual after depreciation and amortisation.

basis. The rationale for expressing ROC per-account is that for the most part, ROC is account-activity driven.

For price control purposes, the allowed level of ROC is converted to an allowance per GJ at the forecast level of annual consumption for the average account. Accordingly, the ROC allowance is sensitive to the assumed or forecast annual consumption for that account.

Origin informed the Commission that in its view there is no systematic variance between ROC for its Standing and Market contract customer bases. We have therefore assessed costs relating to Origin's entire SA gas market, excluding commercial and industrial accounts consuming greater than one TJ of gas per annum.

3.2.2 Retail operating margin (ROM)

Leaving aside corporate tax, a ROM allowance is necessary to recover the cost of the capital that an efficient and prudent retailer needs to invest in its business, alongside the return of capital, in the form of amortisation and depreciation charges. The cost of capital (or capital charge) depends on the quantity of capital that is invested and the weighted average cost of that capital (WACC). The WACC should be set at a level that reflects the level of risk to which a prudent retailer is exposed, given the obligations associated with standing gas contracts in SA.

For price control purposes, ESCOSA calculates a ROM allowance as a percentage mark up on controllable costs, including ROC. As a result, ESCOSA's ROM is not equivalent to retail margins calculated as a residual margin on energy sales revenues or as a mark up on the cost of goods sold.[18]

The ROM allowance is then converted to an allowance per gJ at the forecast level of annual consumption for the average account. Accordingly, ROM is sensitive to allowances for other controllable costs, as well as to the assumed or forecast annual consumption by the representative account.

3.2.3 Account acquisition and retention costs

Account acquisition and retention costs (AAC) refer to the historical and ongoing cost of purchasing, acquiring and retaining energy accounts at a scale proportional

[18] This is an important point in considering benchmarks, since in some instances these are sometimes expressed as margins (mark ups) on EBITDA and other times expressed as residual margins (on revenue).

to the retailer's costs. Allowed AAC can therefore be recovered across ROC and ROM.

Historical account acquisition costs may represent a significant portion of a retailer's asset base and therefore form a component of allowed ROM, including elements of depreciation, amortisation and capital charges.

To the extent that ongoing AAC is expensed rather than capitalised, it may form part of ROC. For simplicity and transparency (and consistency), in recent times regulators, including ESCOSA, have included an allowance for forward AAC exclusively within ROC.

3.3 Significance of ROC and ROM

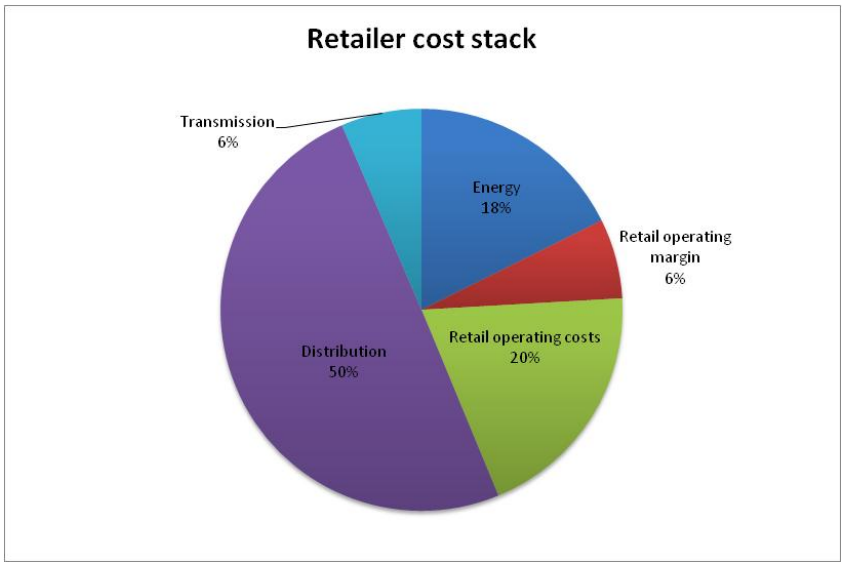
Regulated revenues per GJ are set relative to:

- A representative account– assumed to be consuming a given quantity of gas annually with an average or deemed load factor; and
- A representative or deemed regulated entity – e.g. assumed to be serving a given number of mass market accounts.

Figure 3.1 illustrates the main cost components in retailing gas to residential customers consuming around 21 GJ per annum. [19]

[19] The estimated values are based on Origin Energy's November submission.

Figure 3.1: Standing contract costs 2011-12



This highlights that distribution charges represent by far the largest cost component. Distribution and AEMO charges are set by regulation and hence are not controllable by the regulated entity. Other costs are deemed to be "controllable".[20]

The gross retail margin (ROC and ROM combined), represents around 26 per cent of total estimated retailer costs of serving mass market residential gas accounts. ROC and ROM are slightly higher than the sum of wholesale energy and transmission costs. Distribution and AEMO charges represent around half of total costs.

[20] The two main gas transmission pipelines supplying Adelaide and regional areas are not covered. Accordingly, transmission charges are set by commercial negotiation and hence are controllable.

3.4 Typical retailer functions

Typical retail functions under open wholesale and retail markets in Australia are summarised in Table 3.2 below, together with the major inputs for each function. The table illustrates that labour, capital, and information technology are major inputs required for an energy retail operation. The labour component includes highly skilled and expert labour.

Table 3.2: Typical energy retailer functions (standalone)[21]		
Function	**Activities**	**Inputs**
Energy trading	Load analysis & forecasting Energy trading systems Traders (front office) Middle office Back office Governance & management Carbon and renewable Losses and market reconciliation Market settlement Internal transfer price setting	Expert labour Prudential capital or guarantees Specialist trading and position reporting systems IT and communications Market data and other information Wholesale market settlement systems
Customer services	Call centre Major accounts Retail outlets (or agents) Account inquiries Move in move outs Customer transfers	Customer information system Expert labour Trained labour Capital Specialist call centre systems IT and communications
Sales and marketing	Retail pricing Planning and implementing sales and retention campaigns Ongoing Customer Relationship Management (CRM) Renewables and low carbon Advertising and brand	Expert labour Skilled labour Sales outsourcing CRM systems Purchase of advertising services AEMO customer transfers
Revenue	Receipt and processing of metering data	Skilled labour Purchase of metering services, meter

[21] Note that large national retailers typically also undertake electricity and gas generation, and trading – "merchant". Accordingly, in some cases, energy trading activities may span both retail and generation/merchant activities and a portion of this cost allocated to the Retail Segment. In addition, some management and support activities may span the entire organisation and a portion of this cost allocated to the Retail Segment.

	Operating billing engine and issuing customer bills Payments (including payment channels) Debtor management (including bad debts) Exceptions and dispute management Customer assistance program (incl. vulnerable customers)	information and meter data processing Customer Information System Specialist billing systems Purchase of collections services Capital
Management & support	Finance and planning Strategy and new products Centralised support services (accounts, HR, IT) Management and governance Regulatory compliance and risk management Transmission access Network purchase and risk management, including metering Administration of REES	Expert labour Systems IT Capital Purchase of services (e.g. payroll) Compliance with and administration of REES Legal and regulatory

Not all costs associated with the activities above are recovered from mark ups (margins) on energy sales. Some costs are recovered from specific fees and charges, including:

- Special meter reads
- Disconnection/reconnection
- Account establishment
- Dishonoured cheque fees
- Late payment fees
- Credit card payment fees
- Early termination fee (where applied).

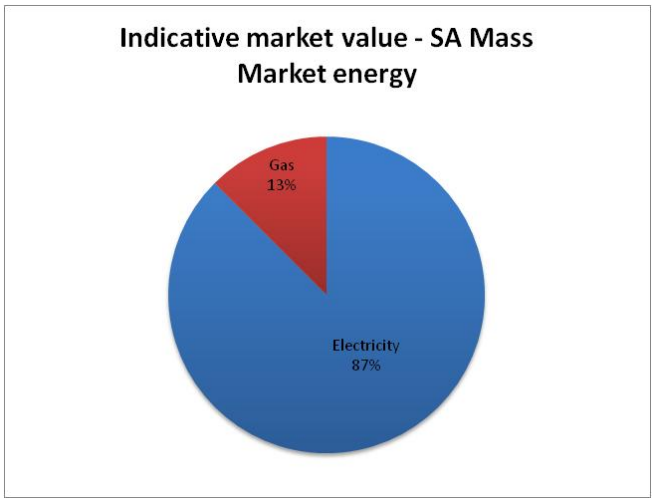
The scope of this review relates to ROC that is recovered from margins on energy sales. The separation of costs recovered from fees and charges, from costs recovered via mark ups, is discussed in chapter 6.

3.5 Market dimensions

There are important linkages and differences between gas and electricity mass retail markets in SA. Gas is subsidiary to electricity in terms of both customer connections and annual expenditure per connection.

Figure 3.2 below shows the relative size of reticulated gas in the South Australian mass energy market. The indicative annual turnover of the gas market is around 13 per cent of the overall SA energy market. [22]

Figure 3.2 – market dimensions



The gas retail market in SA consists of around 405,000 mass market accounts with reticulated supply. [23] This number excludes gas consumption via bottled or reticulated liquefied petroleum gas (LPG).

[22] Note that if lower-cost, off-peak, electricity is taken into account, the electricity market size is lower than shown here. This implies that the gas market is equivalent to somewhat more than 13 percent of the overall SA electricity and gas mass market.

The electricity market in SA consists of around 817,000 mass market accounts. The gas market is therefore less than half the size of the electricity market in terms of accounts.

Industry publications often use the term "customer" to refer to accounts. Given that all gas customers are also electricity customers, for clarity we use the term "account" unless specifically referring to customers.

The average annual gas bill for a residential standing gas contract account is around $600, assuming annual consumption of around 21GJ. This is comparable with a typical annual electricity bill for a residential standing electricity contract account of around $2,100, assuming annual consumption of around 7.6MWh without off-peak load. These data, obtained using ESCOSA's price estimator,[24] are summarised in the Table 3.3.

Table 3.3: Market dimensions

	Accounts (thousands)	Average spend	Market value
Gas	405	$600	$243m
Electricity	810	$2,100	$1,701m
Sum	1,215	$2,700	$1,944m

3.6 Market structure

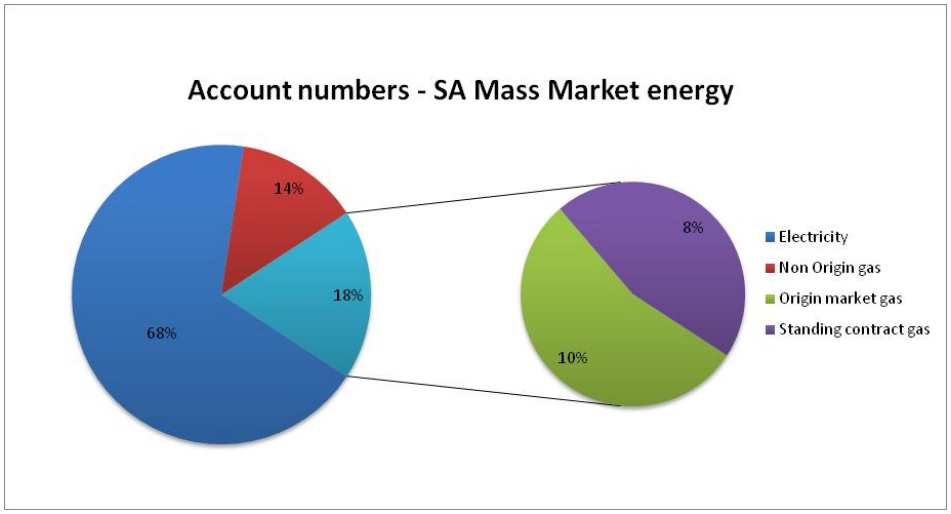
The two incumbent retailers (AGL Energy and Origin) continue to hold significant proportion of the SA energy retail market, alongside TRUenergy, Simply Energy and smaller electricity-only retailers. Market structure focusing on gas standing contracts is illustrated in the pie chart below.

[23] This is drawn from AEMO customer data. A small customer is defined in the Gas Act (SA) as a customer who consumers less than 1 Terra Joule (TJ) per year, including residential and small to medium enterprise customers.

[24] Available here: http://archive.escosa.sa.gov.au/estimator Note therefore that the derived values may not align with the values discussed elsewhere in this report.

Origin Energy holds around 56 per cent of the SA gas mass market as of mid 2010.[25] As shown in Figure 3.3 below, the bulk of Origin's gas accounts are market gas contracts.

Figure 3.3 – overview of mass energy market in SA



Full retail contestability (FRC) commenced in the SA gas market on 28 July 2004. There are four mass market gas retailers in SA – Origin, AGL, TRUenergy and Simply Energy. All four mass market gas retailers in SA also sell electricity. There are no standalone gas retailers, while there are six standalone mass market electricity retailers.

There is only one mass market gas supplier serving regional SA. Origin Energy's confidential submission (at Table 4.5) indicates that regional customers represent just over seven per cent (residential) and six per cent (business) of the total number of customers on standing gas contracts.

[25] See page 28 of the *Annual Performance Report for 2009-10* published by ESCOSA.

4 Origin proposals

Origin submitted its "Proposed Price Path for Standing Contract Gas Customers in South Australia: 2011-12 to 2013-14"[26] on 5 November 2010. This section provides a brief summary of Origin's price path proposal as it relates to ROC and ROM.[27]

4.1 Overview – summary of proposals for ROC and ROM

Origin proposes a stable ROC of $115 per customer in real terms ($2010) over the price path, excluding REES costs. It proposes to 'adjust this forward using an actual CPI per cent approach to account for increasing labour costs and the impact of customer churn.' Origin has also proposed an allowance in the ROC for REES costs for the six-month period 1 July 2011-30 December 2011.

Origin proposes a ROM increasing from the current 13 per cent margin in 2011-12 to 14.6 per cent in the subsequent two years. The relevant components of Origin's proposal are summarised below in Table 4.1.

Table 4.1: Origin's ROC and ROM proposal

	2011-12	2012-13	2013-14
ROC (Real $2010 $/customer)	115	115	115
REES costs (Dec 2011 $/customer)	1.61		
ROC ($Dec 2011 $/customer)	119.47	117.87	117.87
ROM (% of WGC + transmission + ROC)	13%	14.6%	14.6%

[26] Origin, *Origin Energy's Proposed Price Path for Standing Contract Gas Customers in South Australia: 2011-12 to 2013-14* – confidential version (November 2010)

[27] All references are to the confidential version of Origin's submission.

4.2 Overall approach

Origin supports a continuation of the overall approach to regulating retail prices set out in the 2008 Determination. Its submission is: 'therefore concerned with establishing the average retailer revenue for residential and small business standing contract customers required to recover the forecast controllable costs and return an acceptable commercial margin on these costs'.[28]

An important consideration in setting regulated prices, Origin suggests, is an assessment of the level of competition in the small customer gas segment. Origin believes that the decline in the market transfer rate in gas markets since around 2007 is 'largely due to the fact that the reward: risk ratio (i.e. retail margin) for a gas customer is not appealing'. In addition, it states that 'It is important to note that retailers typically use standing tariffs as the reference price for market contracts. If these prices are not reflective of costs nor provide some reward to the retailer in obtaining the customer, competition is likely to continue to stall.'[29]

Origin is supportive of the introduction of a relative price movement (RPM) methodology in the electricity retail market from 2011. It believes, however, that the SA gas market is 'not showing the necessary level of product choice to justify proposing it [RPM] for this period'.[30] Origin believes that ESCOSA should be 'setting prices on a competitive basis with the view that gas retail prices will be de-regulated at the end of the next three year pricing period'.[31]

Origin notes that: 'the regulatory risks of setting a retail margin are asymmetrical - while lower margins will have a direct impact on market competitiveness, if the approved margins are above commercial requirements they will have little impact with competition removing the opportunity for any additional returns'.[32]

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[28] Ibid page i

[29] Ibid page 8

[30] Ibid

[31] Ibid pages 8-9

[32] Ibid page 37

4.3 Proposed ROC

Origin submits that 'total retail costs should include both retail operating costs and customer acquisition costs as a retailer should be able to recover at least the minimum costs that it incurs in obtaining, retaining and servicing its customers'. [33] Origin proposes that the ROC allowance should be set on the basis of the current electricity cost benchmark of $115 per customer for 2010 applied in ESCOSA's 2010 electricity determination. This is on the basis that retail costs do not differ significantly between gas and electricity mass market customers and a similar ROC allowance should be set for both fuel types.

Similarly, Origin seeks inclusion of an allowance for Customer Acquisition Costs (CAC), as is the case for electricity in SA.[34] Origin notes that inclusion of CAC has been accepted by regulators in Queensland and NSW.

Origin considers that ESCOSA's previous approach of 'including CAC as part of the retail margin has not provided an adequate coverage of costs and to improve competition, it should form part of the total retail cost'.[35]

In its benchmarking analysis, in addition to referring to the South Australian electricity sector, Origin refers to pricing decisions or analyses in other jurisdictions for electricity and gas including in New South Wales (by the Independent Pricing and Regulatory Tribunal, IPART), in Queensland (by the Queensland Competition Authority, QCA), in Victoria (by Charles River Associates International), and in ACT (by the Independent Competition and Regulatory Commission, ICRC).

After considering the benchmark data, and assuming a CPI of 2.5 per cent, Origin proposes the appropriate ROC to be the SA electricity benchmark cost (excluding REES) of $115 in real terms ($2010) per annum over the 2011-2014 price path period. Origin also considers ESCOSA should be cognisant that forecast labour costs are rising in real terms.

Given ESCOSA's agreement that REES costs for the first six months of the period be considered as part of the price review, Origin has included REES costs within its ROC proposal for the period 1 July 2011 to 20 December 2011. Contingent on information

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[33] Ibid page iii

[34] See ESCOSA's 2010 *Review of Retail Electricity Standing Contract Price Path Final Inquiry Report & Final Price Determination* (December 2010) page A 88

[35] Ibid page 31

on the evolution of the REES Scheme beyond 2011, Origin considers REES costs should be a separate pass through item.

4.4 Proposed ROM

Origin's believes that a retail margin of 14.6 per cent of controllable costs would be an appropriate margin that reflects the risk of operating in the SA gas market. This proposal is supported by a combination of references to relevant regulator decisions and consideration of other factors.

Origin states that its proposal is: 'at the lower range of that approved for NSW gas retailers, but higher than comparable electricity allowances'.[36] Further, IPART in its final 2010 decision on regulated retail gas prices: 'concluded that a reasonable range for retail margin for a gas standard retailer was 7.3 per cent to 8.3 per cent of sales revenue. Comparing this with ESCOSA's methodology of retail margin, it is equivalent to approximately 14.6 per cent to 16.6 per cent of controllable costs.'[37]

Origin recognises that the inclusion of CAC within ROC has implications for setting the allowance for ROM. Origin is therefore proposing that the current margin of 13 per cent be adopted in the 2011-12 period followed by an increase to 14.6 per cent in the 2012-13 and 2013-14 periods.

Origin proposes that: 'the retail margin be higher than previously allowed because of:

- the limited value of the retail margin in terms of$ per customer, a risk that is exacerbated by the extent of forecast error…;
- the retail margin is not applied to distribution or market charges… A higher return on controllable costs is required to achieve the same return on sales level given the lower percentage of controllable costs in the total standing contract price; and
- there is an additional significant working capital exposure that is unique to SA and Queensland gas markets.' This relates to the 'continued obligation to for [sic] repayment of Envestra's network charges… These prepayment costs were disallowed in the previous determination on the basis that ESCOSA would amend the Access Arrangements to align with industry standards of one month

[36] Ibid page 36

[37] Ibid

in arrears. Over the previous two gas pricing determinations this did not occur and we understand prepayment requirements will continue.'[38]

4.5 Key assumptions

Origin's proposed ROC when converted to a per GJ basis[39] is based on a forecast of average annual consumption for a standing contract residential account of 20.68 GJ per year.[40] This is based on average consumption figures for residential standing contract accounts for the 2008-09 year.

Consumption in 2008-09 was higher than in 2009-2010. Origin judged the latter period less representative of future demand due to slightly higher average temperatures that year.

The 20.68GJ assumption compares with the average consumption per residential account of 22.1 GJ/pa in the 2008 Determination.[41] This represents a 6.3 per cent decrease in average consumption compared with the 2008 determination. For SME customers, average annual consumption is forecast to be 147.1 GJ/pa, a reduction of 5.3 per cent compared with the 155.4 GJ/pa in the 2008 Determination.

To calculate the average consumption figure, Origin departed from the previous 'snapshot' method of forecasting the number of customers and consumption in the 2008 Determination in which mathematically produced average consumption figures were used. Origin has instead based its estimate on forecasts from historical billing information for each of its five geographical customer zones for the period 1 July 2007 – 30 June 2010 for consumers using less than 1 TJ p.a.

To forecast 'customer numbers', Origin extrapolated from historical trends to forecast the number of gas standing contract accounts over the period to 30 June 2014. In doing so, it kept account numbers constant in regions where no other retailers operate. Origin notes that actual switching rates over the 2008-10

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[38] Ibid page 37

[39] This is relevant given the form of price control which relates to average prices per GJ, rather than per account.

[40] Ibid page 40

[41] Ibid page 16

Determination were less than forecast at the beginning of the ESCOSA determination.

Origin used the resulting forecasted account numbers along with the estimated average consumption per account in each region and in each segment to forecast total consumption over the period 2011-12 to 2013-14. Origin then used observed historical percentages of use in its different regions to allocate total consumption into the respective tariff blocks (2 tariff blocks for residential customers from 0-4.5 GJ/qtr and above 4.5 GJ/quarter).

5 Benchmark analysis

We conducted a benchmarking analysis to help inform estimates of appropriate allowances for ROC and ROM. The focus of our analysis is largely on estimates applied in regulator decisions, but extends to other relevant data where available.

In the section below we first describe the benchmarking method we employed, and then discuss the various data sources that have been considered in our analysis. Separate analyses are provided for base ROC, AAC and ROM.

5.1 Method

To inform an efficient retailer cost benchmark we have drawn on recent decisions in comparable jurisdictions (where the allowance is justified on similar grounds). Such comparisons are helpful as they give an indication of what other regulators have deemed as prudent and efficient retail costs. Comparisons of this nature are also insightful as in making rulings, as regulators sometimes consider confidential financial information, and have access to commissioned benchmarking studies that have included cross-State and other data.

There are limited commercial benchmarks available, due to limited public disclosures. These commercial benchmarks are discussed in Chapter 6 below.

International benchmarks are of limited value. This reflects the fact that retailer costs are highly sensitive to local market conditions, including the scope of retail markets.

Normalising for SA

There is no national framework for the economic regulation of retail energy prices. This reflects an expectation under an amendment to the 2004 COAG Energy Market Agreement that retail regulation would be phased out, subject to reviews of the effectiveness of retail competition.[42] As a result, regulator decisions on retail prices

[42] A copy of the Agreement is available at http://www.coag.gov.au/coag_meeting_outcomes/2009-07-02/docs/energy_market_agreement.pdf

continue to be undertaken under jurisdiction-specific rather than national regulatory frameworks.

Consequently, different regulators include varying costs and refer to different methods and parameters in determining allowances for ROC and ROM. It is therefore necessary to take into account the basis on which costs are decided in other jurisdictions and 'normalise' them for SA conditions.

For example, to compare allowances for ROC across jurisdictions, it is necessary to assess the extent AAC are included. Similarly, ROM allowances from other jurisdictions need to be adjusted relative to the method for calculating ROM applied by ESCOSA.

A key difference between ESCOSA and other jurisdictions relates to the definition of retail margin for price control purposes. In jurisdictions other than SA, the allowed retail margin is often expressed as ROM over total estimated costs/revenue. It is therefore equivalent to EBITDA as a percentage of allowed revenue (given assumed consumption volumes). By contrast, ESCOSA sets the ROM as a percentage *mark up* on controllable costs (wholesale gas and transmission costs, plus ROC).

As a result ESCOSA's metric for ROM needs to be adjusted in two respects for it to be comparable with retail margin metrics applied elsewhere:

- ESCOSA's denominator needs to be adjusted to include non-controllable costs – network charges; and
- ESCOSA's denominator needs to be further adjusted to include ROM itself.

Normalising for gas

In addition to normalising benchmarks between jurisdictions, we also consider whether further adjustments are necessary to account for differences between gas and electricity. Key differences between gas and electricity include:

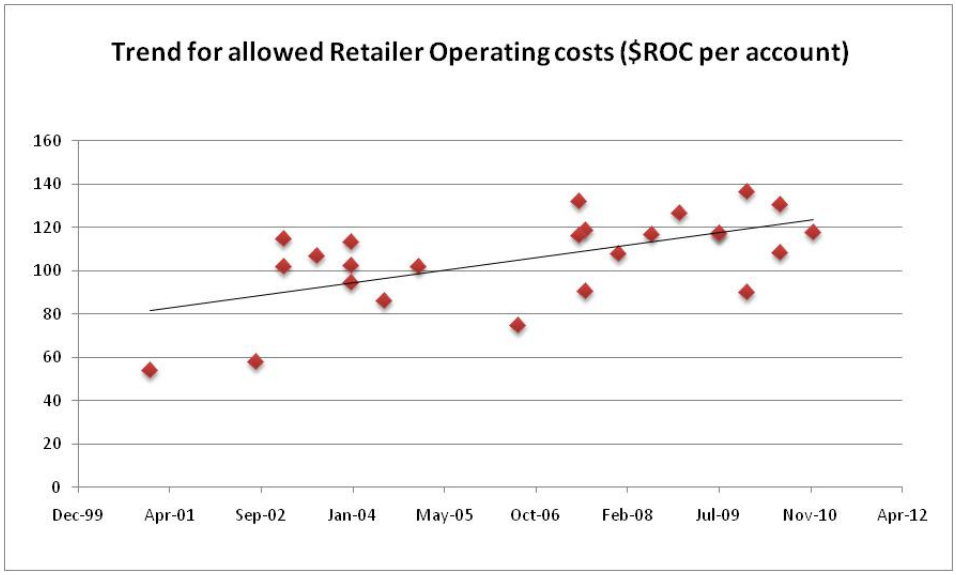
- Network access terms; and
- The lower value of annual expenditure per gas account relative to electricity.

In the sections below, we discuss relevant benchmarks for ROC and ROM.

5.2 ROC

The decisions in other jurisdictions that we have considered in benchmarking ROC are shown in Chart 5.1 below. From the chart we can see that regulatory decisions for ROC demonstrate an upward trend.[43]

Chart 5.1



The data points in the above chart, which we discuss below, may not be directly comparable due to the different methods and operating conditions that regulators apply in making their estimations. These differences may result in higher or lower estimates of efficient costs depending on:

- Pending the transition to the National Energy Customer Framework (NECF), retailers operate under jurisdictional-specific license conditions, sometimes resulting in differences in efficient retailer costs; and
- regulators operate within different jurisdictional regulatory frameworks (unlike distribution network regulation there is no national framework) and hence

[43] Developed in part from IPART, *Review of regulated retail tariffs and charges for electricity*,2010-2013, Appendix G. Values are expressed in $Dec 11.

employ different criteria in making estimations of allowable costs for regulated price setting.

As a consequence, an understanding of each estimate is necessary in order to assess the extent the estimate needs to be adjusted to be an effective benchmark for SA gas market conditions.

Summary of relevant benchmark decisions

In inflation adjusted terms, estimated ROC varies significantly across jurisdictions. Table 5.1 below provides a summary of the relevant determinations and other inputs relevant to our benchmark for ROC. It comments on the major upward and downward adjustments relevant to match estimates to the SA framework.

Estimated retailer costs range between $101 and $140. As noted elsewhere in this report, estimates are subject to uncertainty and error. In some cases, estimates are expressed as ranges with the midpoint usually being applied for price setting purposes. For ease of comparison, all estimates are provided as point estimates. ROC estimates are shown inclusive of AAC estimates, where applicable. In addition, all allowances have been converted to $2011 values.[44]

[44] Nominal values from regulator estimates were converted into $2011 Dec using the value from the decision and adjusting it to $Dec 11 using ABS quarterly CPI data, (with 2.5 % for inflation assumed) for 'All Groups weighted average of eight capital cities'. The most recently available data point from the ABS was December 2010, for which the index was 174.0 (base year of March 1990 = 100). We applied ESCOSA's 9 month lag convention to inflate values. This means that for $Dec 11 we use CPI indices from 3 quarters prior, so for each conversion we refer to the CPI from 9 months prior and refer to $Mar11.

Table 5.1: A comparison of ROC allowances					
State	**Regulator**	**Period**	**ROC/Acct (nominal)**	**ROC/Acct ($Dec 11)**	**Adjustment/comment**
NSW (E)	IPART	Jul10 – Jun13	$109.80	$115.80	Incorporated a CARC component relating in part to NSW switching rates that are lower than SA
ACT (E)	ICRC	Jul10-Jun12	105	109.16	Includes cost of meter reading – recovered via NUoS in SA and NSW Influenced by an earlier estimate that included an incremental allowance for scale disadvantage. No explicit inclusion of an allowance for AAC
Qld (G)	QCA	2007-	130	137.10	Includes specific Qld. costs such as a Pensioner concession rebate
Qld (E)	QCA	Jul10-Jun11	126.41	131.41	Based on roll-forward of BRCI, not updated cost estimates
Vic (E)	AEMC	2007	117	131.71	These values appear to include allowances for depreciation and amortisation
NSW (G)	IPART	Jul 10-Jun 13	101	106.51	No explicit provision for AAC
SA (E)	ESCOSA	Jan 11-Jun 14	115	117.88	$115 excludes REES costs of $12.55 per customer per annum
SA (G)	ESCOSA	2008	89.88	97.13	This excludes AAC as ESCOSA provided for AAC entirely within ROM

In Table 5.2 we list the AAC allowances explicitly, where these are available.

Table 5.2: A comparison of AAC allowances

State	Decision	Period	AAC/account (nominal)	AAC/account ($Dec 11)
SA (gas)	ESCOSA	2011-13	38.50	39.46
NSW	IPART	Jul10 – Jun13	36.8	38.81
ACT	ICRC	Jul10-Jun12	0	0
Qld	QCA	Jul10-Jun11	40.52	42.12
Vic	AEMC	2007	42	47.28
SA (gas)	ESCOSA	2008-2011	28.11	30.38
Qld (gas)	QCA	2008	30	32.42

Each estimate is discussed in greater detail below.

5.2.1 NSW IPART

Electricity

IPART's final decision for ROC for the 2010-2013 period is based on a bottom-up analysis of retailer costs. Unlike the previous IPART review, costs were not estimated relative to a theoretical new mass market entrant electricity retailer.

IPART estimated individually the following cost items using historical data provided by retailers:

- call centre costs;
- customer information costs;
- corporate overhead costs;
- administrative costs;
- billing and revenue collection costs; and
- the costs of bad and doubtful debts.

Amortisation and depreciation costs were accounted for in IPART's estimate for the retail margin, and no additional allowances were made to reflect the impact of the Carbon Pollution Reduction Scheme (CPRS) or the NECF.

IPART's final decision on retail costs for 2010/11 was $(2009/10) 75.3 (excluding CARC). IPART considers that its final decision 'reflects a Standard Retailer's efficient retail costs'[45]

The bottom-up analysis was assessed against a benchmark comparison with estimates made by regulators in other Australian jurisdictions. IPART's benchmarking analysis drew on past regulatory decisions regarding retail costs and CARC, as well as publically available data from AGL and Origin Energy. IPART's analysis considered the range of $95-125 to be appropriate. IPART considered the QCA allowance in particular, to be a valid comparison, as it included CARC components similar to IPART.[46] IPART noted that cost to serve data provided by AGL and Origin Energy were lower than the ROC allowance provided.

For AAC, IPART's bottom-up analysis provides the most thorough recent estimation of AAC of all the jurisdictions. IPART estimated AAC using a bottom-up methodology that individually assessed the costs involved in acquiring new customers; transferring existing customers; and retaining all existing customers. Its estimate of $36.8 reflects the midpoint of an estimated range of $28 to $45, which in turn has been estimated from the historical costs of the Standard Retailers.

IPART's AAC allowance includes the following (in $2009/10).

- Retention costs of $6 per customer. IPART calculated this by subtracting the marketing costs from ROC and spreading marketing costs over the total small retail customer base (recognising that marketing targets existing and new customers).
- Acquisition costs of $28 over the entire customer base. This has been calculated using the midpoint of average acquisition costs by the NSW Standard Retailers of $213.

Costs of transferring customers were estimated at $2 per customer. The costs of transferring a customer onto a negotiated contract ranged between $138 and $167. IPART estimated the per customer cost for transferring new customers from another retailer and for transferring existing customers from a standard to a negotiated contract by:

a. estimating the total cost incurred per customer for each of these transactions;

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[45] IPART's *Review of regulated retail tariffs and charges for electricity 2010-2013*, pages 111-12.

[46] IPART, page. 125.

b. estimating the number of new customers acquired from other retailers and the number of existing customers transferring to negotiated contracts so that these activities were expensed as they occur.

A switching rate of 13 per cent was assumed for customers transferring between retailers, as well as for internally within Standard Retailers.

Gas

IPART's decision for 2010-2013 uses a combination of bottom up historical cost and benchmarking assessments to estimate efficient retail costs.[47] There are significant differences between the gas and electricity regulatory frameworks in NSW. For electricity, the framework is established by IPART within terms of reference set by the jurisdictional Minister, relative to jurisdictional statutory frameworks.

By contrast, for gas, each NSW Standard Retailers has a Voluntary Transitional Pricing Arrangement (VTPA) with IPART and is obliged to set their regulated tariffs and charges in line with the VTPA agreement. Under this arrangement, IPART does not specify a ROC allowance.

IPART used information provided from the Standard Retailers on their actual and forecast ROC to establish an acceptable range of costs of $86 - $117 per account ($2009/10) over the 2010 – 2013 regulatory period, with a midpoint of $101. After giving consideration to each retailer's specific cost drivers and business characteristics (such as the impacts of ActewAGL's new billing system), IPART considered the submitted ROCs were consistent with the ROC range established by past regulatory decisions of $70 to $134 per customer including CARC.

IPART noted that where applicable it benchmarked combined ROC and CARC allowances.[48] In its gas determination, IPART does not explicitly estimate CARC costs.[49]

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[47] Review of regulated retail tariffs and charges for gas 2010-2013: Gas – Final Report, June 2010.

[48] Ibid., page 30.

[49] Ibid., page 28. There is nothing in the IPART report to suggest that the inclusion or otherwise of CAC is relevant to the range of ROC estimates identified.

5.2.2 ACT ICRC

The ICRC's Decision on 2010-2012 retail prices for non-contestable electricity customers included an allowance for retailer costs of $(Jun10) 105. This estimate of retailer costs is, in the ICRC's view, a reasonable balance between the need to allow cost recovery and the need to require the incumbent to operate efficiently.[50]

The ICRC's retail cost allowance is set to cover the costs of billing services; call centres; customer information; and general operating overheads. However, no change was made to the allowance granted in ICRC's 2003-04 decision, which was carried forward in inflation adjusted terms.

The ICRC's ROC allowance does not include any allowance for AAC. In excluding AAC, the ICRC had regard to the social impacts of its decision. This is consistent with previous ICRC reviews and reflects the institutional framework within which ICRC operates.

5.2.3 Queensland QCA

Electricity

In Queensland, notified electricity prices are adjusted annually to reflect changes in the Benchmark Retail Cost Index (BRCI). The BRCI consists of three 'building block' components: for retail, network and energy costs. The retail cost component of the BRCI includes retailer costs, AAC and a retail margin. The QCA is required to estimate allowed costs taking in account the costs of an efficient retailer of sufficient scale and with a customer base representative of all customers in Queensland.

For its 2010-11 decision, the QCA estimated the retail cost component of the BRCI by adjusting the 2007-08 BRCI by consumer and wage inflation. Compared with the previous period, the QCA decided to recognise an increase in retail costs of 13.7%, reflective of a significant increase in estimates of customer acquisition and retention costs. For 2010-11, the retail allowance within the BRCI equates to $(Jun10) 85.89.[51]

The QCA estimated AAC at $(Jun10) 187.66 (equivalent to $(Jun10) 33.61 per customer) and transfer costs at $(Jun10) 109.47 (equivalent to $(Jun10) 6.91 per

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[50] ICRC, *Final Decision Retail Prices for Non-contestable Electricity Customers 2010–2012 Report 7 of 2010* (June 2010) see pages 42-45 in particular, page 37.

[51] QCA, *Final Decision Benchmark Retail Cost Index for Electricity: 2010-11 May 2010*, page 36

customer). Both of these estimates are based on inflation adjusted benchmarks produced in 2007-08 and updated data on customer transfers and switching.[52]

Gas

The Queensland gas market was fully deregulated as from 1 July 2007. There is no regulated price for customers not choosing to enter into market contracts.

In the QCA's report Review of Small Customer Gas Pricing and Competition in Queensland (2008)[53], a range of retail operating costs were discussed. Discussions held with Queensland retailers led to an estimated range of $90-$115 per account per year, excluding AAC and discounts. An estimate by MMA[54] for a new entrant to the market was between $115 and $155 per account per annum; a benchmarked-based exercise produced an alternative estimate of $100 per year for reasonable retail operating costs (including differing FRC costs, inflationary pressure, and Queensland specific costs concerning gas retailing, such as the costs to retailers from administering the Pensioner Concession Rebate). QCA suggested this was a reasonable estimate, although it was higher than most other regulatory decisions.

AAC costs in Queensland's gas market were estimated at $30 per customer per annum in 2008.[55]

5.2.4 Victoria

The most recent estimate for ROC in Victoria is available from a report commissioned by the AEMC in the context of its 2007 review of the effectiveness of retail competition in Victoria.[56] This report provides a benchmark analysis of electricity retailer operating costs by drawing on relevant regulatory determinations, as well as publically available data from retailers AGL and Origin Energy.

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[52] Ibid page 45

[53] QCA *Final Report Review of Small Customer Gas Pricing and Competition in Queensland* (November 2008)

[54] McLennan Magasanik Associates, a firm providing expert advice.

[55] Op cit page 67.

[56] See the *Impact of Prices and Profit Margins on Energy Retail Competition in Victoria*, Charles River Associates International (CRAI), *report for the AEMC,* 2007.

The report concludes that, based on the data available, for gas and for electricity customers, retailer costs of $(Jun07) 75 were a reasonable benchmark. This estimate appears to include depreciation and amortisation costs. Hence the reported margins represent EBIT as a percentage of revenue and not EBITDA as a percentage of revenue.

It is also possible the estimate of retailer costs include costs that are recovered from fees and charges, in addition to costs recovered from mark ups on energy sales. As these items are not separately identified, it is difficult to normalise this benchmark for present purposes. Accordingly, we have placed a lower level of reliance on this data point for the purpose of assessing benchmarks.

AAC estimates contained in the AEMC report of $(Jun07) 49 per customer reflect a weighted average of different customer types. Individual customer AAC estimates were $(Jun07) 42 for residential customers, and $(Jun07) 90 for small business customers.

5.2.5 South Australia ESCOSA

Electricity

In ESCOSA's 2010 review of electricity standing contracts, ESCOSA had regard to submissions, information from AGL, regulator decisions from other jurisdictions, and from expert advice.[57] The Commission decided on a value for ROC of $115 in real terms over the price path, excluding REES costs of $12.55 per customer per annum.

ESCOSA considered that this ROC allowance, when combined with the proposed ROM of 10%, provided a suitable gross margin.

The ROC allowance is intended to cover customer service, sales and marketing, revenue collection, management and support. ESCOSA distinguished between base ROC and ROC, inclusive of AAC. Total ROC was set at $115 inclusive of AAC.[58]

ESCOSA referred to the IPART decision for electricity for 2010-13 and the AAC value of $38.6. Implicitly, the $115 includes an AAC of approximately $38.

Gas

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[57] ESCOSA, *2010 Review of Retail Electricity Standing Contract Price Path Final Inquiry Report & Final Price Determination* (December 2010)

[58] [58] Ibid page A 86

ESCOSA's 2008 decision determined an allowance for ROC based on an estimate of the future prudent controllable costs of a notional retailer with the same standing contract obligations as Origin Energy, the sole Declared Gas Retailer in SA. The ROC estimate was based on a combination of an assessment of Origin's reported historical and forecast operating costs. ESCOSA also had regard to recent regulatory decisions in other jurisdictions. The ROC allowance over the period (2007/08) was $89.88 ($Dec 2008).

In its Gas Standing Contract Price Path Inquiry in June 2008, ESCOSA commissioned a bottom up estimate for ROM, in which the AAC was considered. ESCOSA considered the value attributed to a standing customer where that value was determined by the cost of acquiring a customer. Having regard to IPART's estimate of the one off acquisition cost of an electricity customer of $210.86, ESCOSA concluded an approximate customer value of $28.11 as being reasonable, but acknowledge it was not a precise estimate because it depended on various assumptions. With regard to the value of a gas customer compared to an electricity customer, ESCOSA noted in particular that the cost incurred by a new mass-market entrant retailer in acquiring (electricity) customers was distinguishable from the costs that might apply to Origin Energy due to a number of reasons.

The first of these was that ESCOSA expected the marginal cost of acquiring a gas account to be very much lower than the cost of acquiring an electricity account because "the churn of gas occurs largely as part of a dual-fuel offer, with gas being offered as the marginal fuel." In addition, ESCOSA considered that the value of a gas account was substantially smaller than for an electricity account because the average bill was lower for a gas account, and thus "a rational energy market retailer should not be prepared to invest as much in acquiring a gas customer as it would for an electricity customer".[59]

5.3 ROM

Key "raw" benchmarks for ROM are summarised in the table below. Note that margins are calculated on different bases. The majority of benchmarks are expressed as EBITDA margins whereas ESCOSA's values are expressed as mark ups on controllable costs.

[59] ESCOSA, *2008 Gas Standing Price Path Inquiry Final Inquiry Report & Final Price Determination* pages A 97 and 98.

Table 5.3: A comparison of ROM allowances				
State	**Decision**	**Period**	**Base**	**ROM (per cent)**
NSW (elec)	IPART	Jul10 – Jun13	EBITDA/revenue	5.4
ACT (elec)	ICRC	Jul10-Jun12	EBITDA/revenue	5.4
Qld (elec)	QCA	Jul10-Jun11	EBITDA/revenue	5.0
SA (elec)	ESCOSA	Jan 11-Jun 13	EBITDA/WEC + ROC	10.0
SA (gas)	ESCOSA	Jul 08- Jun 11	EBITDA/WGC + transmission +ROC	13.0
NSW (gas)	IPART	2010-2013	EBITDA/revenue	7.8

5.3.1 NSW IPART

Electricity

The retail margin allowance provided under the 2010-13 review of regulated electricity tariffs was set so that allowed EBITDA is equivalent to 5.4 per cent of total allowed retailer costs.[60] The supporting report expresses its results in term of EBITDA as a percentage of total revenues and provides a range of between 4.7 and 5.8 per cent.[61]

We assume that IPART's intention is to define the retail margin relative to regulated revenues, which are equivalent to total costs, applying IPART's N+R cost building

[60] See page 129 of IPART's *Final Report: Review of regulated retail tariffs and charges for electricity 2010-2013 – March 2010*.

[61] See for Example Table 1 on page 2 of a report for IPART entitled *Estimation of the regulated profit margin for electricity retailers in NSW*, dated 16 March 2010, prepared by Strategic Finance Group Consulting.

block approach. Accordingly, the percentage value for expressing the retail margin is the same whether it is applied to total costs or total revenues.[62]

IPART aims to set the ROM allowance at a level sufficient to compensate Standard Retailers for the systematic risk they face when supplying electricity to small customers on regulated tariffs.

Non-systematic risks, including as a result of exposure to wholesale energy price risk, is dealt with in part via a "volatility allowance'. Our understanding is that ESCOSA intends addressing this type of risk in setting the allowance for Wholesale Gas Costs. Accordingly, the volatility allowance component needs to be deducted when normalising the IPART estimate for ROM.

Gas

The retail margin allowance provided under the 2010-13 review of regulated gas tariffs was set so that allowed EBITDA is equivalent to 7.8 per cent of total allowed retailer costs.[63] The supporting report expresses its results in term of EBITDA as a percentage of total revenues and provides a range of between 7.4 and 8.3 per cent.[64]

As with its electricity estimate IPART's estimate for ROM is limited to systematic risks and is derived from a three part method.[65] IPART elected to set the allowed retail margin based on the average of the expected returns and benchmarking approach, but excluded the bottom up approach.

Under the expected returns approach, the value of the business and required cash flow are estimated simultaneously. The benchmarking analysis is performed with

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[62] A possible alternative interpretation is that IPART's percentage values relate to 5.4 percent of 94.5 percent of total allowed revenues. This would produce a modest but significant discrepancy between the SFG report and IPART decision and hence does not appear to be a valid interpretation.

[63] See page 129 of IPART's *Final Report: Review of regulated retail tariffs and charges for electricity 2010-2013 – March 2010*.

[64] See for Example Table 1 on page 2 of a report for IPART entitled *Estimation of the competitive profit margin for gas retailers in NSW*, dated 24 May 2010, prepared by Strategic Finance Group Consulting.

[65] A bottom-up analysis was also conducted, but this was considered (by SFG and IPART) to be based on biased data, and was subsequently ignored.

reference to the reported margins of the broader class of listed retailers and retail segment data of energy retailers where this is available.

Regulator benchmarks were considered by IPART, which found that ROM allowances ranged from between 5.0 per cent and 5.6 per cent (equivalent to between approximately 10.6 and 11.9 per cent under the ESCOSA methodology). IPART discarded its analysis, noting that: '[t]hese estimates of margin are all well below the range of reasonable values recommended by SFG.'[66]

IPART noted the substantially higher values for gas relative to electricity retailer margins and attributed this to the following factors:

- Gas retailers' higher fixed costs, which increased the estimated margin under the expected returns approach;
- Gas retailers' higher estimated depreciation costs, which increases the estimates based on EBITDA; and
- Lower assumptions regarding gas retailers' cash operating costs.

5.3.2 ACT ICRC

The ICRC sets its equivalent of the ROM allowance with the aim of providing a return on investment the incumbent must earn to provide retail services. In setting this allowance, it also aims to encourage other retailers to enter the market and competitively offer alternative electricity supply contracts (assuming they can operate more efficiently or achieve other economies that can be passed through to customers in the form of lower prices).

The ICRC's 2010-11 decision increased the retail margin to 5.4 per cent (from 5.0 per cent). The ICRC applies this margin on an EBITDA basis equivalent to the IPART values. In making this decision, the ICRC relied heavily on the analysis conducted for IPART in its 2010 electricity determination[67].

[66] *Ibid*, page 35.

[67] ICRC, *Final Decision Retail Prices for Non-contestable Electricity Customers 2010–2012 Report 7 of 2010* (June 2010) see pages 42-45 in particular.

5.3.3 Queensland QCA

Electricity

The allowed retail margin in Queensland is set as a mark up on the costs included in the BRCI. The QCA adopted a ROM allowance of 5 per cent of total BRCI costs (excluding ROM) for the initial 2007-08 BRCI decision. This allowance was based on a benchmarking analysis of other regulatory decisions that determined an appropriate range of 2 to 8 per cent in the first BRCI decision in 2007-08. For the 20010-11 decision, this margin was unchanged. The QCA noted that its 5 per cent figure was below that of IPART's 5.4 per cent, but considered there was no compelling argument to change it, and noted that 5 per cent fell in the range considered reasonable in NSW of 4.8 per cent to 6 per cent.

Gas

As noted earlier, retail gas prices are not subject to direct economic regulation in Queensland. The QCA stated in a report on the gas market in 2008 that retail margins of 6.5% for residential customers (less than 100 GJ/year) and 4.5% for small business customers (between 100GJ and 500 GJ /year) were reasonable.[68] These values for Queensland are therefore comparable with NSW electricity but appear low compared with NSW gas.

5.3.4 SA ESCOSA

Electricity

ESCOSA seeks to set the ROM allowance at levels sufficient for a mass market retailer to recover costs associated with serving its SA mass market accounts. ROM is expressed as a percentage *mark up* on wholesale electricity costs (WEC) and ROC.

ESCOSA had regard to estimates for efficient ROM from other jurisdictions, alongside a limited analysis of retail margins based on financial data provided by the regulated entity (AGL Energy) for its national retail-business segment. Based on comparable retail margins in other jurisdictions of 5% to 5.4% of sales revenue, estimated that a ROM mark up of 10 per cent based on WEC + ROC continued to be appropriate.

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[68] QCA *Final Report Review of Small Customer Gas Pricing and Competition in Queensland* (November 2008) p 69

Gas

ESCOSA's intention is to set ROM at a level sufficient to compensate investors for committing capital to a retail business. This included working capital, physical capital and intangible assets such as acquired customers.[69]

ESCOSA's *2008 Gas Standing Contract Price Inquiry* increased the ROM allowance from 10 per cent to 13 per cent of controllable costs, which include wholesale gas supply costs, transmission costs, and ROC. This reflected a "derived" methodology based on ESCOSA's previous determination (which estimated a ROM of 12.3 per cent) and a bottom-up estimation (which estimated a ROM of 13.05 per cent).

The increase in the gas ROM was based on the following key factors:[70]

- Low margins in the residential market meant that the commercial viability of supplying gas is particularly vulnerable to forecast errors.
- A change in the 'controllable cost base' had reduced the base on which the margin was applied.[71]
- Greater working capital was now required because changes were not made to the Envestra Access Arrangements as foreshadowed in the 2005 gas standing contract price determination.

ESCOSA's ROM estimate includes a component for historical AAC. ESCOSA states in its final decision that costs associated with customer acquisition activities, depreciation and amortisation costs should be incorporated into the retail margin allowance rather than the allowance for retail operating costs[72]. It clearly excludes these from its ROC of $89.88 discussed above.

Of note is the comment by ESCOSA that the bottom up estimate which includes $28.11 for an estimated customer value was a "reasonableness check" rather than a determinant of the margin itself. ESCOSA explicitly states in its bottom up estimate discussion that a key component of bottom up ROM is the cost of acquiring a

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[69] ESCOSA, *2008 Gas Standing Contract Price Inquiry*, pg. A 89.

[70] Ibid page. 90.

[71] REMCo charges were removed from Origin's controllable costs.

[72] ESCOSA, *2008 Gas Standing Contract Price Inquiry*, Page A-78.

customer and that if this value is not nil, then the retail cost allowance does not include an allowance for CAC.[73]

The final 13 per cent decided by ESCOSA was based on its derived estimate (12.3 per cent) and bottom up approach (13.05 per cent). It is therefore not possible to say that the 13 per cent includes an explicit $28.11 for AAC, but rather that this value may have influenced ESCOSA in arriving at its final 13 per cent estimate.

5.4 Summary

In this section we identified and assessed the relevant data points to inform a benchmarking analysis. Separate analyses were conducted for the components of ROC (retailer costs and AAC) and ROM. For each analysis, raw data were subject to a normalisation process that took into account relevant jurisdictional differences, as well as adjusting for economy wide price movements.

[73] ESCOSA, *2008 Gas Standing Contract Price Inquiry*, Page A 97

Table 5.4 summarises the results of our analysis normalising all benchmarks on the basis of ROM as a percentage of total allowed revenue. This enables the ESCOSA values to be compared on a like-for-like basis.

Table 5.4: Summary of benchmarking analysis

State	Regulator	Period	Total ROC (inc. AAC)	ROM
			$/Account	Per cent of allowed revenue
NSW (elec)	IPART	Jul10 – Jun13	115.80	5.4
ACT (elec)	ICRC	Jul10-Jun12	109.16	5.4
Qld (elec)	QCA	Jul10-Jun11	131.41	5
Qld (gas)	QCA	From 2007	131.71	6.5
NSW (gas)	IPART	Jul 10 – Jul 13	106.51	7.8
SA (elec)	ESCOSA	Jan 11 – Jun 14	117.88	5.2
SA (gas)	ESCOSA	Jul 08- Jun 11	97.13	5.8

While some of the benchmark estimates explicitly involved assessments of economies of scale, there were no explicit assessments of economies of scope. IPART's estimate, for example, may be based on a standalone electricity retailer, rather than a dual fuel retailer. To the extent this is so, benchmark estimates may over-state efficient costs for a dual fuel retailer.

Table 5.5 below shows the inputs applied to convert the proposed SRG ROM calculated as a mark up on controllable costs to a ROM calculated as a percentage of allowed revenue/total cost (for residential accounts).

Table 5.5: Inputs used for $ROM estimate per account		
Item	**cost**	**Source**
Network	298.49	SRG calculation based on Origin proposal (average)
Wholesale gas	114.89	SRG calculation based on Origin proposal (average)
Transmission cost	39.22	SRG calculation based on Origin proposal (average)
ROC	103.13	SRG analysis
ROM	33.43	SRG analysis
Total cost/allowed revenue	588.76	

Converting benchmarks from ROM as a percentage of allowed revenue to ROM as a mark up on controllable costs is problematic as it requires obtaining equivalent values for each of the items in Table 5.5 for each of the benchmark allowances. In some instances data on cost components is not readily available or requires interpretation and extrapolation. Accordingly, it is more reliable to convert ESCOSA's mark up on costs to a margin on revenues, than to convert benchmarks from margins to mark ups. The estimated ROM value for SA gas for 2011-12 of $33.43 is equivalent to an EBITDA/revenue margin of 5.68 per cent.

6 Findings and further analysis

6.1 Introduction

This chapter examines the cost of supplying gas to mass market gas customers in SA as a basis for comparison with the benchmarks identified in the previous chapter. The purpose is to assess the extent relevant benchmarks should be adjusted in order to estimate efficient ROC and ROM for gas in SA.

Overall finding

The report's overall finding is that Origin's proposals for ROC and ROM, taken together, may exceed the costs that an efficient mass market retailer would be expected to incur in meeting the responsibilities of standing contract supply to small gas customers in SA. Accordingly, at this stage in the Commission's 2011 Gas Review process, our estimate for setting ROC and ROM allowances is below those proposed by Origin in its formal proposal dated November 2010.

The estimated combined ROC and ROM is $19.61 per account or 12.6 per cent lower than Origin's proposal for residential accounts.[74]

Our estimates compared with Origin's proposals are summarised in Table 6.1 for residential standing contract gas accounts.

Table 6.1- Summary of findings - residential

Item	Sapere estimates	Origin proposal[75]	Percentage difference

[74] All dollar values discussed in this report are exclusive of the Goods and Services Tax (GST). The ROM dollar calculation is exclusive of AEMO charges as these are deemed to be non-controllable costs. The values are also exclusive of an allowance for the Residential Energy Efficiency Scheme.

[75] Origin in its formal proposal does not decompose ROC into Core Retail Costs and AAC. Origin does not propose dollar values for ROM per customer but the values are consistent with its proposed dollar values per GJ. The dollar values for ROM are subject to allowances for controllable costs over the price path period and the values in this report should be interpreted as indicative only.

All December 2011 dollar values	$/account	$/GJ	$/account	$/GJ	
Core Retail costs (ex REES)	78.41[76]	3.79	NA	NA	
Account acquisition costs (AAC)	24.72	1.20	NA	NA	
Total retail operating costs (ROC)	103.13	4.99	117.87	5.69	-12.5
Retail operating margin (per cent)	13		14.1		-7.8
Retail operating margin (ROM)	33.43	1.62	38.29	1.85	-12.7
Gross retail margin (GRM)	136.56	6.60	156.16	7.55	-12.6

[76] See discussion below suggesting this value should be adjusted for the second and third years of the price control period.

For business accounts our estimate is $26.89 per account or 9.8 per cent lower than Origin's proposal. Table 6.2 provides corresponding findings relative to business standing gas contracts.

Table 6.2 Summary of findings - business

Item	Sapere estimates		Origin proposal		Percentage difference
All December 2011 dollar values	$/account	$/GJ	$/account	$/GJ	
Retail costs (ex REES)	78.41[77]	0.53	NA	NA	
Account Acquisition Costs (AAC)	24.72	0.17	NA	NA	
Total retail operating costs (ROC)	103.13	0.70	117.87	0.80	-12.5%
Retail operating margin (per cent)	13		14.1		-7.8
Retail operating margin (ROM)	144.65	0.98	156.80	1.07	-7.7%
Gross retail margin (GRM)	247.78	1.68	274.67	1.87	-9.8%

The estimates for business accounts vary from residential accounts for two key reasons relating to ROM:

- We understand the average residential account is assumed by ESCOSA to consume 20.68GJ per annum, while the average business account is assumed to consume 147.1GJ per annum.
- There are differences in wholesale gas and transmission costs reflecting the flatter consumption profile (higher load factor) for the average business account.

We have expressed our findings as point estimates for purposes of transparency and ease of comparison. We note, however, that there is necessarily a level of imprecision with these estimates and these should be interpreted as midpoints within a range.

[77] See discussion below suggesting this value should be adjusted for the second and third years of the price control period.

Use of benchmarking and other methods

The Sapere assessment of ROC was based on a combination of the following data and other information:

- Origin's formal proposal to the Commission dated November 2010, together with additional confidential supporting information provided to ESCOSA, including actual and forecast costs for the national retail business segment;
- A review of relevant efficient benchmarks for ROC and ROM, normalised for conditions in SA gas;
- A review of the outlook for the costs of serving mass market retail gas accounts in SA; and
- Consideration of the risks associated with mass market energy retailing, other than risks addressed in relation to wholesale gas purchase and transmission costs.

Our estimates for ROC and ROM placed greater weight on benchmarks than on Origin's reported actual and forecast costs for its national retail business segment. In part this reflects the fact that under best practice price regulation, ROC and ROM should be set relative to the costs of an efficient energy retailer, rather than to costs incurred specifically by the regulated entity (Origin in its capacity as the Declared Gas Retailer in SA). To do otherwise could potentially penalise high levels of efficiency or reward low levels of efficiency.

In addition, there are practical difficulties in estimating ROC and ROM for mass market gas accounts in SA. There is no financial reporting entity corresponding to Origin's SA gas retail mass market business. Available cost data relate to a national retail reporting entity that spans both gas and electricity. In addition, these data depend on the allocation of energy trading and corporate overhead costs to the retail segments of large national retailers. These data also include commercial and industrial accounts, typically with significantly higher average costs per account.[78]

These limitations mean extensive extrapolations and judgments are necessary to estimate efficient ROC and ROM associated with serving Origin's SA mass market

[78] We note that Origin's submission separated Industrial and Commercial accounts from mass market accounts. From public disclosure by some other retailers, however, it is often not possible to separate the costs of serving large accounts from others.

gas customers. This limits the validity of estimates of ROC and ROM based on available financial data.

Our analysis refers broadly to the same set of benchmarks as proposed by Origin in its submission, with respect to ROC and ROM values. This included relevant regulator decisions for both gas and electricity in SA (electricity), NSW, Queensland and the ACT, as well as ECOSA's estimates of ROC and ROM for the SA electricity mass market in its 2010 Review. Our analysis uses reported costs for both Origin and other major retailers to inform the interpretation of relevant benchmarks in relation to the specific circumstances that apply in SA gas retailing.

While some of the benchmark estimates explicitly involved assessments of economies of scale, there were no explicit assessments of economies of scope. IPART's estimate, for example, may be based on a standalone electricity retailer, rather than a dual fuel retailer. To the extent this is so, benchmark estimates may over-state efficient costs for a dual fuel retailer.

Operational cost drivers – ROC

Our estimated overall ROC per account is $103.13 compared with Origin's proposed $117.87. Note the values are *exclusive* of an allowance for the Residential Energy Efficiency Scheme (REES).

In 2011 values, the ROC provided for in the 2008 ESCOSA Gas Determination is $97.13 per account. Our estimate of ROC for the period 2011/12-2013/14 therefore represents an increase of $6.00 per account or 6.2 per cent relative to the ROC allowance in the current standing contract gas tariff. The overall GRM also represents an increase of 4.6 per cent relative to a case where the existing GRM is rolled forward using updated wholesale gas costs.

Account Acquisition Costs

In its recent Determinations for both gas and electricity, ESCOSA acknowledged that AAC may legitimately be incorporated into Standing Contract average prices. The benefit of this for Standing Contract consumers is that retailer costs can be estimated relative to large scale, national retailers, as opposed to small scale local retailers with declining account numbers.

Origin proposed that GRM[79] incorporate an appropriate allowance for AAC. Consistent with ESCOSA's 2010 electricity determination, Origin proposed that the

[79] Gross Retail Margin refers to the sum of ROC and ROM.

AAC allowance should be provided for within the ROC component, rather than within ROM.

In its November 2010 Issues Paper, ESCOSA suggested there may be a case for considering the acquisition of gas customers to be a by-product of the acquisition of electricity customers. In this case, the AAC allowance could be set based only on the *marginal cost* of acquiring a gas customer.[80]

The issue, therefore, is whether the AAC allowance applied by ESCOSA in its 2010 Electricity Determination should be applied for gas. Our view is that two adjustments are necessary to take into account relevant differences between the gas and electricity markets in SA:

- the fact that switching rates for gas are significantly lower than for electricity in SA; and

- convergence between gas and electricity, together with the fact that in SA gas is subsidiary to electricity, implying that the marginal cost of the average gas account switch is less than that for the average electricity account switch;

Account switching activity in the SA gas market historically is significantly lower than in the SA electricity market.[81] Based on historical data, average gas switching rates are around three quarters of electricity switching rates.

It also seems likely that in future gas switching rates will continue to be lower than for electricity. This is because competition in the SA gas market is weaker than competition in the SA electricity market. Whereas there are ten mass market electricity retailers, there are only four mass market gas retailers. All four mass market gas retailers in SA also sell electricity (TRUenergy, Origin, AGL and Simply Energy). There are no standalone gas retailers, but there are six standalone mass market electricity retailers.

Convergence efficiencies apply to customer switching. This reflects evidence that:

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[80] See discussion at page 25 of ESCOSA's *November 2010 Issues Paper for its Review of Gas Standing Contract Prices 2011/12 – 2013/14*.

[81] See for example Figure E:1 on page 3 of ESCOSA's *Annual Performance 2009-10 report for the South Australian Energy Supply Industry*, dated November 2010.

- a significant and growing proportion of customers purchase both gas and electricity from the same provider;
- benchmark AAC allowances may not fully take into account dual fuel efficiencies in retailer operating platforms;
- gas is very much the subsidiary market in the SA electricity and gas mass market context; and
- the marginal switching cost for gas is likely to be significantly less than for electricity.

Estimating the average account switch saving from energy market convergence is difficult and there are limited data. Nevertheless, in principle the efficiency saving could be substantial on a per account basis. For present purposes, we suggest an estimate of 30 per cent of the estimated stand alone cost is applied. We note, however, that there is a significant level of uncertainty over this value and hence it may require revision on the basis of further information.

A further relevant consideration is there is only one mass market gas supplier serving regional SA. Origin Energy's confidential submission (at Table 4.5) indicates that regional customers represent just over seven per cent (residential) and six per cent (business) of the total number of customers on standing gas contracts.

If AAC were set at electricity market switching rates, it is possible that Origin could be over-compensated with respect to its gas accounts. The result could be higher prices for SA gas accounts, especially those in regional areas where customers are unable to switch retailers.

AAC estimate

Our AAC estimate is based on our understanding of the AAC component incorporated within ESCOSA's final 2010 decision for electricity. This component has been adjusted for the lower switching rate[82] applicable to the SA gas market.

In its discussion of ROC benchmarks from other jurisdictions, ESCOSA's 2010 electricity Determination referred to the customer acquisition and retention cost

[82] The industry often uses the term "churn" to refer to switching but we prefer "switching" to differentiate from account switching within the term of a retail contract.

(CARC) value from IPART's 2010-2013 decision for electricity[83] and implicitly used this in its reasoning of the CARC for SA, as it decided on a total ROC of $115, which was at the lower end of IPART's total ROC.

We converted this $38.50 CARC $Dec10 to its $Dec11 value ($39.46). We disaggregated this value and in particular the allowances for account retention costs and transferring existing customers, applying the values referred to in IPART's bottom up analysis.[84]

The difference between this and ESCOSA's implied CARC used in its 2010 Electricity Determination was then calculated ($30.66, being the new account acquisition component of CARC). This value was then subject to two adjustments:

- $7.91 was deducted to reflect the fact that the historical switching rate for the SA gas market is 74 per cent of that for the SA electricity market; and
- a further $6.82 was deducted to reflect the estimated marginal cost of gas switching, based on an assumed efficiency saving of 30 per cent.

The final step was to sum the adjusted new acquisition cost with the retention and transfer costs. This resulted in an estimated $24.72 for gas AAC.

[83] ESCOSA, *Final Inquiry Report & Final Price Determination 2010* page A 86 table 8.1

[84] See page 121 of IPART's *Review of regulated retail tariffs and charges for electricity 2010-2013*.

The calculation is summarised in Table 6.3.

Table 6.3- AAC estimate			
	Nominal	$Dec11	
Overall CARC allowance, of which…	$38.50	39.46	Nominal value in $Dec10
Retention costs	$6	$6.60	Nominal value in $Dec09
Transfer costs	$2	$2.20	Nominal value in $Dec09
New Account acquisition component		$30.66	
Adjustment for SA gas switching rate		$22.75	11.25% vs15.2% based on AEMO/REMCO monthly transfer data[85]
Adjustment for marginal cost of gas switching due to convergence		15.92	Based on 70 per cent of $22.75
Sum of adjusted acquisition cost and retention/transfer costs		$24.72	

6.1.2 Standing contract and market contract customer segments

In response to follow up questions, Origin has confirmed its view there are no structural differences in the cost of serving standing contract and market contract customer segments. Further, it has confirmed there are no structural differences in average consumption between these segments. Origin has also confirmed that it does not attempt to differentiate ROC and ROM between standing and market contract customer segments in its internal financial reporting systems.

Our estimated total ROC incorporates a component for AAC. Accordingly, there do not appear to be grounds for differentiating between the cost of serving standing and market contract gas accounts in SA.

[85] The switching data related to monthly averages for the 36 month period from 1 January 2008 to 31 December 2010.

6.1.3 Overall ROC

Our estimated overall ROC is $103.13 compared with Origin's proposed $117.87 per account. This value is *exclusive* of an allowance for the Residential Energy Efficiency Scheme (REES).

In 2011 values, the ROC provided for in the 2008 ESCOSA Gas Determination is $97.13 per account. Our estimate of ROC for the period 2011/12-2013/14 therefore represents an increase of $6.00 per account or 6.2 per cent relative to the ROC allowance in the current standing contract gas tariff. The overall GRM also represents an increase of 4.6 per cent relative to a case where the existing GRM is rolled forward using updated wholesale gas costs.

6.1.4 Residential Energy Efficiency Scheme

Origin proposed an allowance for REES of $1.60 per account for the second half of 2010-11 based on the existing REES scheme.[86] Our understanding is that this proposal is consistent with ESCOSA's view on the efficient cost of meeting the existing REES.

Origin noted that the future of the REES scheme beyond 2011 is uncertain. It proposed that the cost of meeting REES liabilities thereafter would be managed via pass through arrangements.

A possible alternative ESCOSA could consider is to make a provisional allowance for REES costs in 2012-13 and 2013-14 on the best available information on REES costs. This would be subject to revision once decisions on the future of REES have been made. An advantage of this option is that some provision is made for REES in the second and third years of the price path period, while there remains flexibility to adjust this via pass through provisions if circumstances change.

6.2 Risk

6.2.1 Overall assessment of Origin's ROM proposal

Origin's proposal is based primarily on the benchmark established under NSW IPART's 2010 Review of regulated retail tariffs and charges for gas.[87] Origin's

[86] Refer to Page 33 of Origin's Confidential Submission dated November 2011.

[87] Refer to page 36 of Origin's Confidential Submission.

proposal does not provide a comprehensive, itemised, cost justification for a material increase in ROM.

The implication of Origin's proposal is for ROM to be set at an average of 14.1 per cent over the three year period. Our preliminary view is that the present mark up for 13 per cent should be retained throughout the price path period for reasons set out below.

The difference between Origin's proposal and our estimated ROM allowance is modest in dollar terms. Origin's proposal provides for an implied ROM allowance of $38.29 per account. Our estimate is around $33.43, which is $4.87 or 12.7 per cent lower than Origin's for residential accounts. For business accounts, the difference is lower in percentage terms (7.7 per cent) but greater in dollar terms ($12.15), reflecting the much higher average consumption for average business accounts.

6.2.2 Basis for Sapere ROM estimate

The 2010 IPART gas determination represents a relevant benchmark. We note, however, that the IPART determination was made under Voluntary Transitional Pricing Arrangements (VTPA) specific to NSW.

In SA, the relevant regulatory framework is set under the ESCOSA Act. Accordingly, we are inclined to place greater weight on SA-specific benchmarks, and in particular the 2010 Electricity Determination and the current (2008) ESCOSA Determination for gas.

The current 2008 ESCOSA Gas Determination provides for the ROM to be set at 13 per cent of controllable costs. This allowance appears to incorporate a component for historical AAC.[88] In addition, it incorporates an additional component to reflect working capital requirements specific to the terms of access to Envestra's SA gas network.

The issue is whether there are valid grounds for departing from the 13 per cent value for the purpose of setting the ROM allowance over the period 2011/12-2013/14. Origin proposes three considerations in support of an increase the ROM allowance:[89]

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[88] See discussion at pages A97- A99 of Part AB of ESCOSA's *2008 Gas Standing Contract Final Determination.*

[89] See pages 36 and 37 of Origin's Confidential Submission.

- The limited value of the retail margin in terms of $per gas account, exacerbated by the forecast error over average consumption levels;
- A higher ROM is required where ROM is calculated exclusive of non-controllable costs (network and AEMO charges); and
- The additional working capital costs that arise from the pre-payment of Enevstra network charges, an arrangement that is unique to SA.

Each of the points raised in Origin's proposal are discussed below.

6.2.3 ROM allowance and forecast uncertainty

We agree it is relevant that the average expenditure per account for gas is around one third of that for electricity, and hence that the ROM proposed by Origin is much lower than the equivalent ROM allowance for SA electricity.

Further, as the form of control is an average price cap, the actual level of ROM in any given period is sensitive to uncertainty over future levels of gas consumption. Based on historical data, consumption levels can vary on a seasonal basis, as well as in response to energy market and economy wide trends. As a result, there is a risk of mismatches between allowed and actual ROM as a result of uncertainty over the value of key inputs, notably average consumption levels per account.

It appears the issue of the mismatches between allowed and actual ROM, due to forecasting errors, was thoroughly canvassed in the 2008 Determination. The question now is whether there have been relevant developments or new information to emerge on this matter.

For the purpose of the present analysis, we assume that forecast uncertainty in relation to consumption volumes is addressed as part of the setting of allowances for wholesale gas and gas transmission costs. The present issue is therefore limited to mismatches between allowed and actual ROM.

It is possible there are structural factors reducing average gas consumption per account in SA. As noted in ESCOSA's Annual Performance Report, annual gas consumption per account appears to be declining.[90]

A relevant factor in assessing this matter is the assumed annual consumption per account applied in converting ROC per account to ROC per GJ. Origin's proposed

[90] Refer to Figure 3.9 on page 44 of ESCOSA's Annual Performance report, Op Cit.

ROC is based on a forecast of average annual consumption for a standing contract residential account of 20.68 GJ per year.[91] This is based on average consumption figures for residential standing contract accounts for the 2008-09 year.

Consumption in 2008-09 was higher than in 2009-2010. In its proposal, Origin judged the latter period less representative of future demand due to higher average temperatures that year.

The 20.68GJ assumption compares with the average consumption per residential account of 22.1 GJ/pa reported for the 2008 Determination.[92] This represents a 6.3 per cent decrease in average consumption compared with the 2008 determination. If accepted by ESCOSA, the proposed reduction in the assumed consumption per account decreases the probability that forecast consumption exceeds actual consumption.

It also appears relevant that, in the event of evidence of a structural decline in average gas consumption over the price path period, there is an opportunity for Origin to propose a change in the consumption forecast applied as part of the Annual Alteration of Retailer Tariff provisions in the 2008 Determination. This mechanism reduces forecast related risks.

In light of the considerations outlined above, it appears that the risk of mismatches between allowed and actual ROM as a result of forecast uncertainty is significant. Nevertheless, if ESCOSA accepts Origin's proposal to reduce the forecast average consumption value, and retains the Annual Alteration of Retailer Tariff provisions in the 2008 Determination, this risk does not appear to require any increase in the 13 per cent ROM provided for in the 2008 Determination.

6.2.4 Calculation of ROM based on controllable costs

We do not agree that the calculation of ROM based on controllable rather than both controllable and non-controllable costs represents a reason in itself to increase the ROM allowance. The benchmark normalisation method employed in our analysis specifically addresses the fact that network and AEMO costs are excluded from the calculation of ROM in SA, whereas this is not the case for many benchmarks. In particular, the normalisation method takes into account the level of network costs

[91] Origin, *Origin Energy's Proposed Price Path for Standing Contract Gas Customers in South Australia: 2011-12 to 2013-14* (November 2010) p 40.

[92] Refer to page 16 of Origin's 2010 proposal.

relative to the total cost of goods sold, plus ROC. The one exception to this finding relates to working capital associated with network access, discussed below.

6.2.5 Additional working capital associated with network access

It appears that the issue of working capital costs relating to network charges was taken into account by ESCOSA in its decision in 2008 to set ROM at 13 per cent. Accordingly, the question is whether new developments or information require this allowance to be increased.

We agree that working capital costs for retailers relating to network charges are higher in SA than in other jurisdictions, reflecting network access terms set by the Australian Energy Regulator. We also agree that network working capital costs may not be fully captured by our benchmark normalisation method.

On the assumption regulated network charges are set so as to reflect payment terms, the SA network access arrangements have the effect of transferring network working capital costs from the controllable to the non-controllable category. The effect of network arrangements on working capital costs is therefore limited to this secondary effect of the transfer of working capital to controllable costs on the calculation of ROM. This effect on the calculation of the ROM is, therefore, only a fraction of the value of working capital associated with network charges.

There is no evidence provided so far to support the view this cost has materially increased since 2008, or that the 2008 ESCOSA Determination was in error. Accordingly, there do not appear to be grounds for recommending a change to ESCOSA's 2008 Determination on this matter.

6.2.6 Overall assessment on ROM

Our overall assessment on ROM is that in its November proposal and information subsequently provided, Origin has yet to demonstrate that the present 13 per cent ROM allowance is unsatisfactory. Accordingly, at this stage in the 2011 Gas Review process, there do not seem to be grounds for increasing ROM to 14.1 per cent.

6.3 Cost escalation and/or efficiency adjustments

Origin's proposal is that ROC should remain constant in real terms over the price path period while ROM would increase in the second and third years. There is scope for potential further efficiencies associated with convergence between gas and electricity, but the timing and scale of these is difficult to determine. A further relevant issue is the extent to which it is assumed convergence benefits are immediately passed through to consumers in the form of lower prices, or retained by retailers.

6.4 Dynamic efficiency – economies of scope and scale

Energy retailing costs (ROC and ROM) are subject to significant economies of scope and scale, as well as ongoing dynamic efficiencies.[93] This means that whether allowed mark ups equal actual ROC and ROM is sensitive to assumptions regarding:

- The assumed scale: - if account numbers are lower, other things being equal, mark ups required to recover ROC and ROM are higher. Conversely, if account numbers are higher, then ROC and ROM are lower. This dynamic reflects the fact a substantial portion of retailers' costs are typically fixed and do not automatically reduce with a decline in account numbers. This means that if account numbers reduce significantly, efficient ROC increases.[94]
- The assumed scope: - there are significant cost advantages in retailing both gas and electricity to customers. The marginal cost of selling a second energy type to a customer is substantially lower than selling a first energy type.
- Assumptions on business process automation: - routine energy business processes – processing energy consumption information, invoicing and collecting revenues – are capable of being automated. Consequently, efficient ROC and ROM are capable of dynamic changes in efficiency. Depending on certain factors such as consistency in regulatory frameworks, the greater the scale and scope, the greater the potential efficiency gains from increased business process automation.

Economies of scope and scale, together with automation, are resulting in some key trends in Australian energy retail markets.

- Consolidation — there has been significant consolidation in energy retailing, with the two major national energy retailers (Origin Energy and AGL Energy) having more than 3 million accounts.[95]

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[93] It may be the case that some COGS are also subject to scale economies, but this is outside the present scope.

[94] As a result of outsourcing some key retailer functions, it is possible for smaller retailers to gain some of the scale advantages of larger retailers.

[95] See AGL Energy's *2010 Annual Report* which states that as at 30 June 2010 AGL had 1.3m dual fuel customers. The derivation of the percentage of total and dual fuel customers is discussed in chapter 6 below.

- Retailer business process convergence – major national retailers are gradually transitioning toward common retail business processes and systems.

- Account convergence — major national retailers sell both electricity and gas and it is likely that convergence is a key driver behind customer switching activity.

- Automation – retailers are continuing to automate their business processes in order to drive down costs.

A further, related, trend is vertical integration between retailing and electricity generation functions. Major national energy retailers also own generation portfolios. Following the privatisation of NSW energy retailers, energy retailing and energy distribution will have been largely separated.

In applying benchmarks and interpreting cost data, it is important to take into account economies of scale and scope, as well as related dynamic efficiencies. As noted earlier it is also important to take into account other key assumptions that affect forecast ROC and ROM, including forecast customer composition and average consumption. All these matters are discussed in chapter 6 below.

6.4.1 Convergence – dual fuel

Economies of scope from convergence between electricity and gas have two aspects.

- Business process convergence. This is a process whereby process duplication is removed or minimised by a common business platform, where feasible.

- Customer account convergence. This is a process whereby duplication in servicing two accounts belonging to a single customer is removed, where feasible.

The two types of convergence are complementary. While they are inter-related, they should be distinguished from a cost assessment perspective.

There may be other efficiencies from convergence that reduce overall retailer costs other than internal retailer costs – for example in wholesale energy and transmission purchasing. There are also potential scope efficiencies as a result of vertical integration – for example generation/trading functions. These are relevant in the SA gas market context. There appears to be advantage in combining gas fired generation with gas retailing, as cited in ACIL-Tasman's 2010 report of interviews with SA energy retailers.

Business process convergence

Business process convergence is where internal retailing functions and costs (customer service and billing systems) can be used for both fuel types. For example, instead of separate customer information (CIS) systems for gas and electricity accounts, there is a single, integrated CIS.

Scope for business process convergence is increasing due to:

- The forthcoming National Energy Customer Framework (NECF). The NECF will replace the various state-based and fuel-type specific regulatory arrangements and enable retailers to operate a nationally and fuel type consistent business process.
- Integration of business processes and supporting IT systems (systems convergence). This integration is sometimes part of normal IT replacement cycles. It may also be a result of a strategic initiative, as in the well known case of AGL's Project Phoenix.

A significant portion of a retailer's business process can potentially be provided by a common platform for both gas and electricity. The scope of the common platform could include:

- Retail product pricing;
- Sales and marketing;
- Customer account acquisition and retention;
- Customer account movements, energisation/de-energisation;
- Some aspects of account transfers (see comments below);
- Customer services – the call centre;
- Revenue – billing engine, payments, debtor management, customer assistance programs;
- Energy trading – overall trading systems, including middle and back-office;
- Management, including regulatory, pricing and compliance; and
- Associated IT systems.

Fuel-type specific retailer business processes are likely to remain in the following areas.

- A specialised gas purchasing team with demand forecasting, wholesale pricing capability (including load factor forecasting) and an understanding of gas transmission procurement and retail market settlement.
- A need for gas-specific processes for managing gas metering data and converting this to a form that can be processed by the common billing platform.
- Some aspects of account transfers.
- Working capital costs – which are value rather than account driven.

Our assessment is that business process efficiencies have taken some time to develop since the advent of full retail contestability enabled multi-utility energy retailing. In part this reflects delays in moving toward nationally consistent regulation of retail energy markets.

For example, until the creation of the AEMO, gas and electricity markets operated separate customer account transfer systems. Given that the AEMO's electricity account transfer system (NEMSATS) is electricity-specific, our understanding is that the AEMO itself has yet to integrate NEMSATS fully with the gas customer transfer system inherited from REMCO/Gas Market Co.

Ongoing constraints on market consolidation may also be a contributing factor. National retailers may decide to defer integrating business processes until completion of major transactions such as the purchase of NSW energy retailers.

Another factor contributing to the slow pace of change is the difficulties and risks associated with large scale IT projects. For example, AGL's project Phoenix took substantially longer and cost more than it expected.

In its public statements to shareholders, including in its 2010 Annual Report, Origin Energy stated that it is implementing "integrated" IT platforms for its retail business segment. The term "integrated" appears to refer in part to integration between gas and electricity IT platforms and associated business processes. Origin has confirmed in its confidential submissions to ESCOSA that it currently operates largely separate business processes for its electricity and gas accounts.

Customer account convergence

Customer account convergence enables retailers to reduce ROC and ROM per account by avoiding duplication of account services relating to a single customer. This could include the following:

- Duplicate, parallel, entries for two accounts in the customer information system (CIS) are replaced with a single entry per customer.
- Retailer-customer communications are streamlined. For example instead of separate gas and electricity bills, dual fuel bills replace single fuel bills. This can reduce monthly billing costs.
- Other operational activities are streamlined – for example debtor management, move-in, move-out.
- Customer (account) acquisition activities are streamlined – a single sales transaction covers both gas and electricity accounts.

In addition to the retailer benefits identified, customers may also perceive a benefit from account convergence. Customers avoid holding separate gas and electricity accounts and can pay gas and electricity bills with a single transaction. They may also enjoy price discounts and other incentives enabled by convergence related efficiency gains.

A key variable in determining the materiality of efficiency gains from account convergence is the current extent of dual fuel accounts. In SA, the theoretical maximum extent of dual fuel accounts is less than 50 per cent of the overall energy market mass market. In reality, given various market "frictions", it could be expected that the actual proportion of gas accounts that is dual fuel for any given retailer could be significantly less than 50 per cent.

There is limited and varied data on the extent of account convergence within this theoretical limit. The 2010 Colmar Brunton survey commissioned by ESCOSA indicated that around two thirds of total customers who have gas also purchased electricity from the same retailer.[96,97] Those in regional areas are reported to be significantly less likely to have the same retailer for gas and electricity (65 per cent of metropolitan vs. 46 per cent of regional reported having the same retailer). This implies that around 115,000 SA customers are single fuel when they could be dual fuel.

In response to follow up questions from ESCOSA in relation to Origin's formal proposal, Origin has stated that: 'only around 36% of our customers nationally are

[96] The sample of those reported to have both electricity and gas is 285 from an overall sample size for residential customers of 600, which appears consistent with the overall proportion of the market that is dual fuel in SA.

[97] See Page 69 of the Colmar Brunton report to ESCOSA on consumer preferences.

dual fuel (i.e. hold both and electricity and gas account with Origin)'. Origin indicated it is unable to determine the proportion of its total SA accounts that are dual fuel. Significantly, Origin remains the largest retailer serving the potential dual fuel market in SA.

Publicly available data published by AGL in its 2010 Annual Report indicate a high level of customer account convergence nationally. The Annual Report states that the number of dual fuel customer accounts increased to 1.36 million.[98] The reported total number of accounts is 3.2 million, consisting of 1.9 million electricity and 1.4 million gas accounts.[99] Accordingly, 42.5 per cent of AGL's accounts are dual fuel.

If we assume that 1.36 million dual fuel accounts correspond to 680,000 customers, this implies 3.2 million accounts corresponds to 2.5 million customers. In other words, there are 1.27 customers for every account and 0.78 accounts for every customer.

Based on these values it is possible to convert our recommended ROC per account of ($103.13) to a ROC per customer. The resulting ROC value per customer is $130.96. Similarly, AAC of $24.72 per account corresponds to $31.39 per customer. These results are shown in Table 6.4.

Table 6.4 – ROC per account and ROC per customer

Item $	Total retail operating costs ($m)	Per account ($)	Per customer ($)
Core ROC	250.6	78.41	99.57
AAC	79.1	24.72	31.39
ROC	330.0	103.13	130.96

Estimating overall efficiency gains from convergence

Estimating the overall efficiency gains from gas and electricity convergence is problematic. Available financial and benchmark data relate to individual accounts, not to individual customers. It is also possible some data relate to stand-alone electricity retailers, rather than dual fuel retailers.

[98] See page 2 of AGL's *2010 Annual Report*.

[99] Note all numbers are rounded and may not exactly tally.

Some publicly available cost per-account data reflect the weighted average cost of:

- Dual fuel accounts;
- Electricity only accounts; and
- Gas only accounts.

Other things being equal, if the weighted average cost could be unbundled, it would reveal:

- The average cost for dual fuel accounts is less than the overall weighted average cost per account; and
- The average cost for single fuel accounts is greater than the overall weighted average cost per account.

Accordingly, if the percentage of dual fuel accounts can be increased, the average per account cost would decrease.

To our knowledge, retailer financial information systems in Australia typically do not distinguish between gas and electricity accounts. They either track costs on an input basis (e.g. labour) or on a functional basis (e.g. customer service). This appears to reflect a widespread assumption within the industry (and by regulators) that key retailer operating costs do not materially differ between fuel types. The main difference relates to costs recovered from the ROM allowance, and reflects the much lower value of controllable gas costs.

As data purportedly relating to "customer" acquisition costs actually relate to account acquisition costs, they reflect the weighted average of overall expenditure on account acquisition. This is inclusive of cost savings from creating two accounts relating to a single customer. Again, the cost for dual fuel accounts can be expected to be less than the overall weighted average.

Our analysis of benchmark data, adjusted for inflation, indicates that regulator benchmarks have so far not reflected any efficiency dividend from convergence. Benchmark costs per account have moderately increased in real terms over the last decade.

6.4.2 Overall assessment of cost escalation/efficiency adjustments

There are a number of upward pressures on ROC and ROM. These include the following.

- Transition costs associated with moving to the National Energy Customer Framework (NECF). The NECF could result in some one-off costs during the

transition. As discussed below, however, these could be offset by ongoing cost savings.

- In the event of substantial real retail price rises, for example as a result of increases in COGs, retailer costs could rise. Possible cost increases could result from: higher working capital, higher debtor management costs and higher bad debtors (write-offs).
- The costs of implementing some form of carbon price, possibly alongside the costs of administering other measures designed to reduce carbon emissions.

At the same time, there are downward pressures on retailer costs. These include the following:

- NCEF should enable retailers to deploy standard retail platforms nationally and further centralise front and back office services. In its public disclosures Origin has signalled its intent to rationalise its separate gas and electricity retail platforms and move to a single retail platform spanning both gas and electricity.
- Potential further economies from gas and electricity account convergence. We estimate that around 25 per cent of the SA gas market could be converted from single to dual fuel accounts.
- Declining cost of standard IT systems and scalability of key retailer IT systems (for example Customer Information Systems) against a background of continuing consolidation of national energy markets – notably the sale of the NSW energy retailers to Origin and TRUenergy; and
- Potential cost reductions from outsourcing and specialisation of key functions – for example Origin's outsourcing of certain IT functions and AGL's reported gains in terms of its retail system costs.

Where there is uncertainty over cost escalations, these can be addressed through pass through and other tariff adjustment provisions. On the other hand, there are potentially grounds for reducing ROC and ROM allowances, in particular relating to potential further efficiencies relating to gas/electricity convergence.

There is scope for potential further efficiencies associated with convergence between gas and electricity, but the timing and scale of these is difficult to determine. A further relevant issue is the extent to which it is assumed convergence benefits are immediately passed through to consumers in the form of lower prices, or retained by retailers.

In setting the level of efficiency adjustments, a number of factors should be taken into account, including:

- Uncertainty over estimates of achievable efficiency gains and the timing of these;

- The importance of incentives and the desirability of sharing efficiency benefits, whereby the regulated entity is rewarded for identifying and initiating efficiencies; and

- The significant risks of complex information system and business process transformation projects. Risks include efficiency benefits being smaller and/or later than expected.

Depending on how estimation and efficiency benefit sharing issues are analysed, we suggest forward efficiency adjustments relating to core ROC of up to 5 per cent per annum, before sharing, over the final two years of the price control period, may be reasonable. A reduction in core ROC implies a slight reduction in ROM.

Table 6.5 below summarises the implications of two efficiency adjustment scenarios for the period from 2011-12 to 2013-14 (for residential).

Table 6.5: Projected efficiency adjustment			
2.5 per cent case			
(per residential account)	2011-12	2012-13	2013-14
Core ROC	78.41	76.45	74.54
AAC	24.72	24.72	24.72
ROC	103.13	101.17	99.26
ROM	33.43	33.17	32.92
GRM	136.56	134.34	132.18
5 per cent case			
(per residential account)	2011-12	2012-13	2013-14
Core ROC	78.41	74.49	70.77
AAC	24.72	24.72	24.72
ROC	103.13	99.21	95.49
ROM	33.43	33.17	32.92

GRM	136.56	132.38	128.41